THE UNIVERSITY OF ALBERTA

VALUES AND ATTITUDES OF MILITIA

OFFICER CADETS

BY

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The undersigned certify that they have read, and recommend
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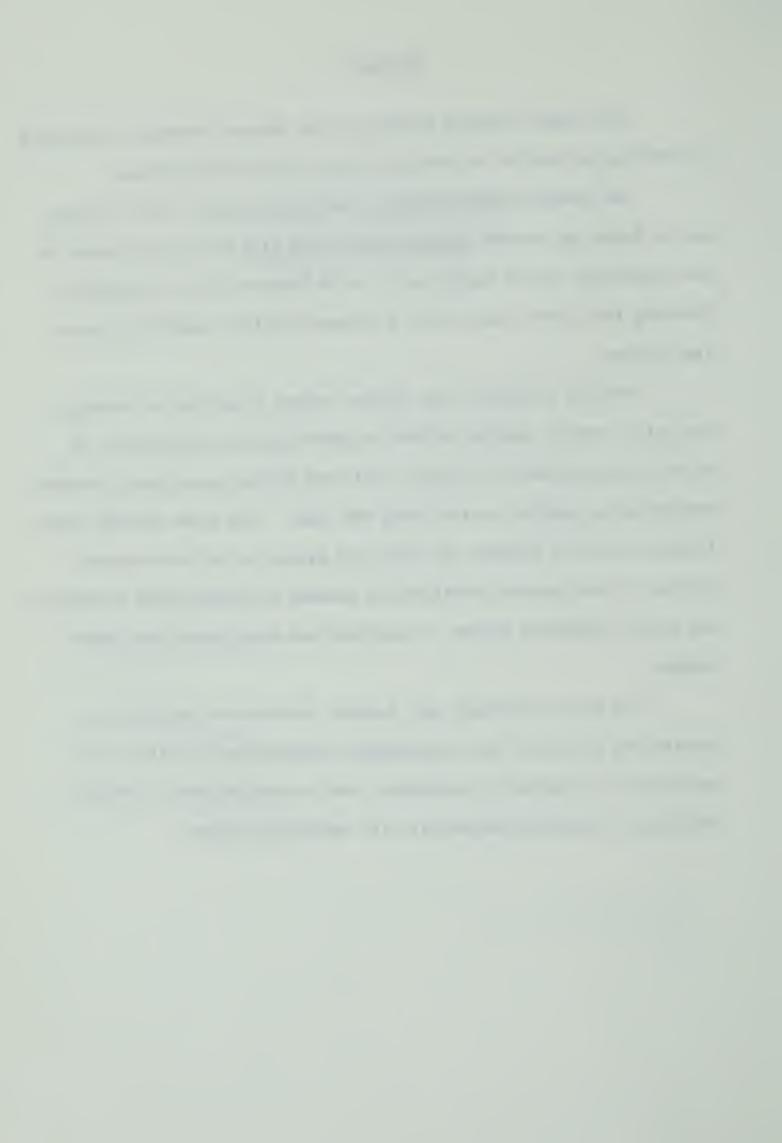Master of Education.

ABSTRACT

This study examines Canadian Armed Forces leadership assessment procedures in relation to officer cadets values and attitudes.

The Rokeach Dogmatism Scale and Value Survey, Adorno F Scale and La Forge and Suczek Interpersonal Check List were administered on two occasions, twelve weeks apart, to 66 Reserve Officer University Training Plan cadets undergoing a 16 week military leadership training program.

Results indicated that officer cadets classified as average and below average leaders differed significantly on the measure of right authoritarianism (F Scale), with the former group being the most authoritarian and the latter being the least. The above average cadet leaders scored in between the other two groups on the same measure. Nothing of the expected relationship between Self-Ideal-Self Congruence and cadet leadership grades or dogmatism and such grades was established.

The study concluded that further research was required to clarify the nature of the relationships between the 22 critical requirements of leadership assessment, peer rating influences and the attitude of authoritarianism with its underlying values.

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The 66 ROUTP Cadets

My family

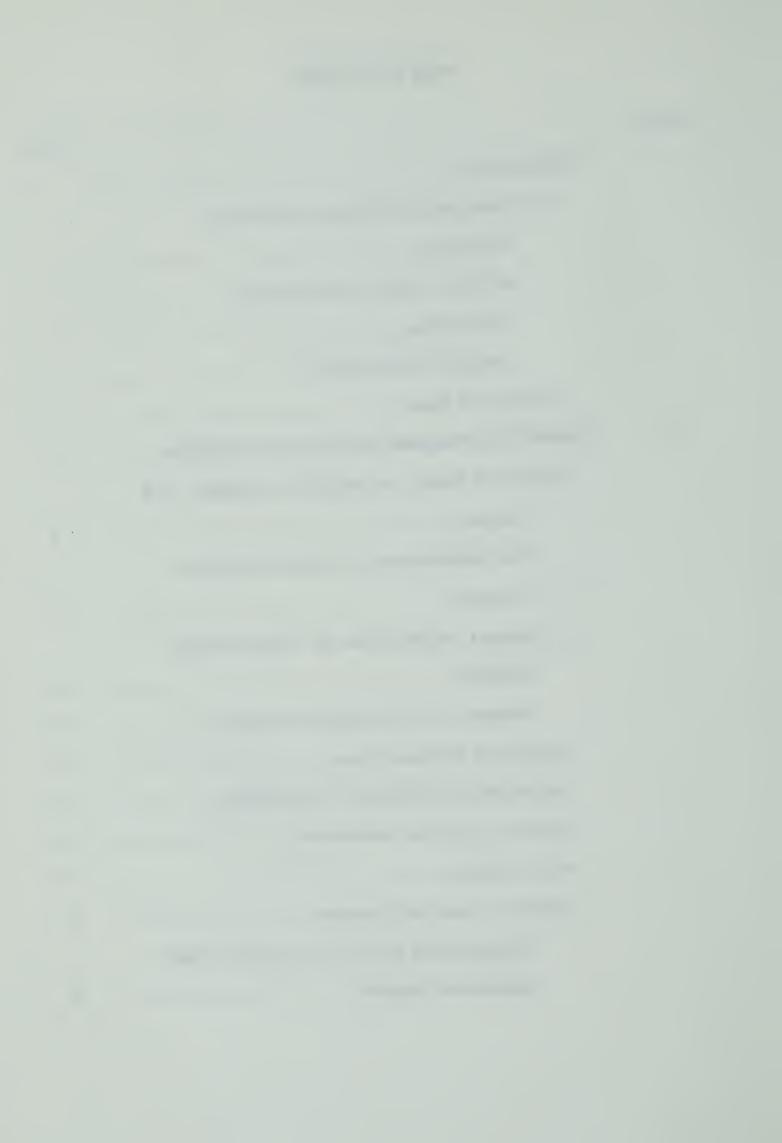   Judy
    Sherri Lynn
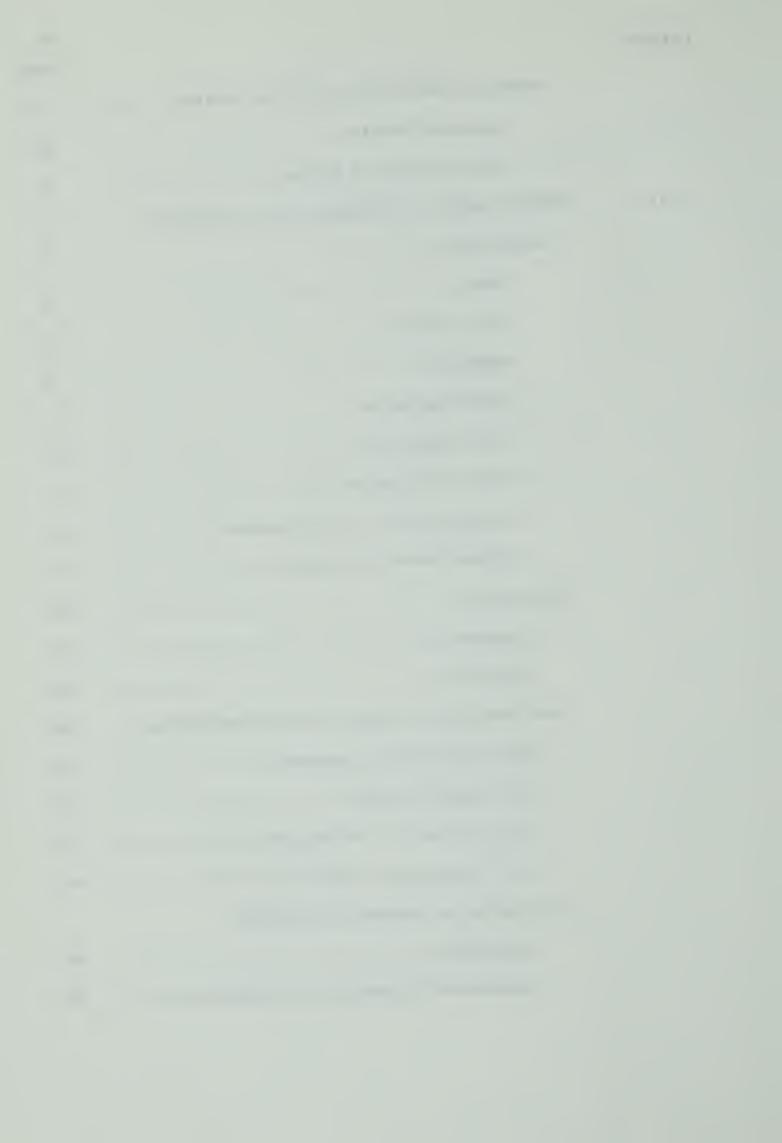   Kimberly Ann

"Gratitude is the heart's memory"
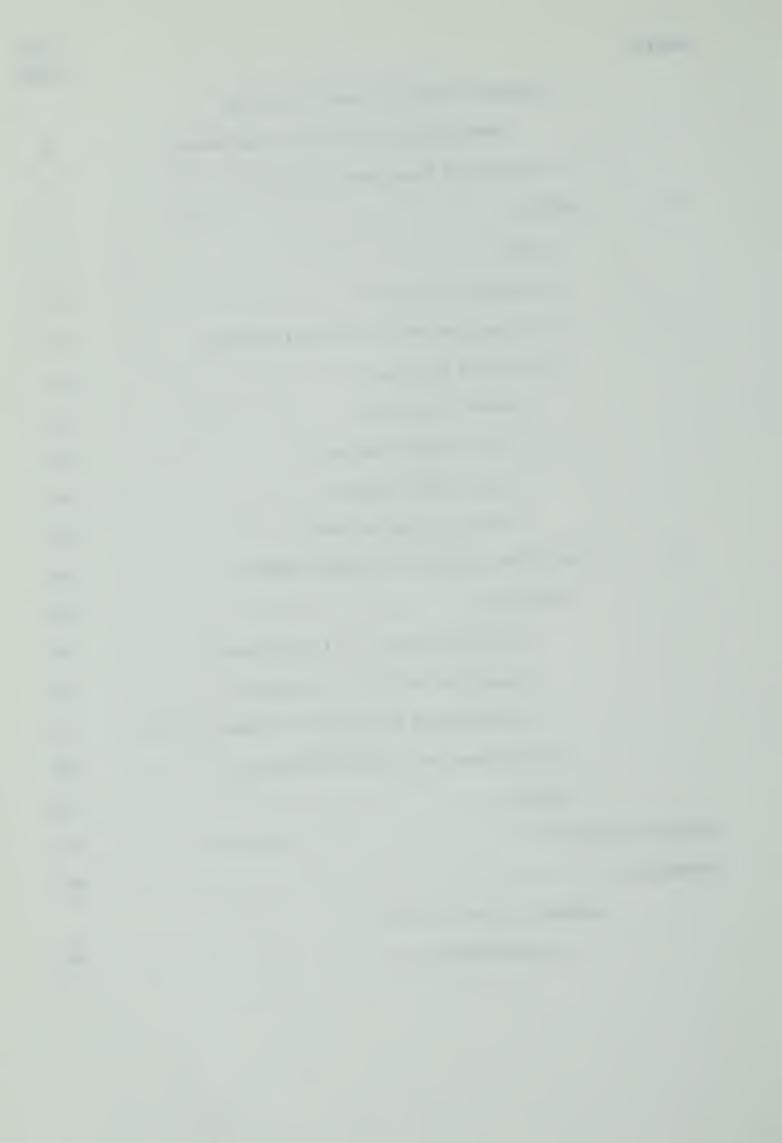

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INTRODUCTION

The theme of this investigation is centered around answering the
following question: What attitudes and values differentiate the success-
ful military leader from the unsuccessful?

In 1963 a meeting of the Canadian Army Council directed that the
matter of failing of officer cadets due to lack of leadership qualities
be investigated. Consequently Terry and Otke (1964) did an investigation
aimed at discovering the underlying causes of this problem. The primary
concern of the study was the examination of First Phase Practical
Training and assessment since it was in the earliest stages of training
that the largest number of failures resulted. The term First Phase
Practical Training (Phase I) denotes the 16 week military training
program on which Reserve Officer University Training Plan (ROUTP) cadets
embark during their summer of instruction. Prior to 1968 ROUTP cadets
were expected to attend two additional summer training programs in
successive years, namely, Phases II and III, but this requirement was
dropped because of budgetary restraints.

The absence of uniform leadership assessment procedures presented
a problem that made research in the area difficult. The major recom-
mendations made by Terry and Otke (1964) to rectify the situation are as
follows:

> 1. Military skills and knowledge subjects...be
>   emphasized to a lesser degree in the overall

assessment of officer cadets.

2. The Peer Ratings Technique be officially
   adopted as a valid and reliable method of
   assessing officer cadet leadership ability...

3. Evaluation of leadership effectiveness be
   based on assessment of behavior spelled out
   in the 12 Critical Requirements rather than
   on the trait qualities of a leader.

4. The final overall method of assessment consists
   of the above three components weighted as
   follows:

   (1) Military skills and knowledge   25%
   (2) Peer Ratings   30%
   (3) Leadership Evaluation   45%

        Total Assessment: 100%

5. A fact-finding board of officers be instituted
   at schools to adjudicate on officer cadets of
   doubtful proficiency (p. 58).

As a direct result of these recommendations and the previous re-
search of Otke (1958) a new assessment procedure for officer cadets
evolved based on the Leader-Follower-Situation concept of leadership.
This theory considers leadership in terms of the following three
criteria and it can be readily translated into the current theoretical
statements of Homans (1961) and Hollander (1964):

1. The leader, with his personal needs, values,

   attitudes and capabilities.

2. The followers, with their personal needs, values,

   attitudes and capabilities.

3. The situation itself and the demands it places on

   both the leader and his followers.

Prior to 1963 the "Trait Theory" formed the basis of most evaluation and leadership training in the Canadian Forces. According to this theory the human personality is seen as comprised of a large number of different characteristics or traits, some of which are possessed by leaders which differentiate them from their followers. The shift from the trait approach was largely instigated by Stogdill (1948). He found in his literature survey of 124 research studies on leadership, carried out over the previous twenty year period, that there was little evidence to indicate that there is any single "trait" which consistently differentiates leaders from followers, except perhaps, intelligence.

Pre-Commission Leadership Assessment Procedures

The object of leadership training in the Canadian Forces is to produce as rapidly as possible officers and men well qualified to carry out the duties to which they will eventually be assigned. The assessment system for officer cadets in use today is based on the three components mentioned in the recommendations of the Terry and Otke (1964) study cited earlier; the only difference being that the components are now weighted differently and cadets are now assessed on 22 Critical Requirements instead of 12.

Military Skills and Knowledge. This component of the assessment system refers primarily to gradings earned on academic subjects evaluated by means of written or performance examinations. The subjects taken arranged in order of importance and weight are as follows: tactics,

map using, weapons training, staff duties and communications. The
reason for a very low percentage weighting (20%) on this component of
assessment was to ensure that a cadet passes primarily on the basis of
displayed leadership ability and not academic proficiency.

Peer Ratings. This portion of the assessment system refers to
each group member's rating of every other group member on a recognizable
quality such as leadership. During the last week of training the cadets
in each of the groups are asked to rate each other on a seven point scale
which is reproduced in Appendix A-1. Peer ratings constitute 30% of the
overall Phase I assessment.

Critical Requirements. The term critical requirements refers to
the essential elements of leadership which discriminate between success-
ful and unsuccessful leaders. The critical incident technique, described
by Flanagan (1952), was the procedure used by Otke (1958, 1966) in the
extensive job analysis that generated twenty-two critical requirements.
Included in Appendix A-2 are the 22 Critical Requirements ranked and
weighted for Phase I training. This portion of the cadet assessment pro-
cedures constitutes the final 50% of his grade and is tabulated at the
completion of training.

Purpose of the Study.

The purpose of this investigation was to critically examine officer
cadet assessment methods in relation to above average, average, and below
average cadets values and attitudes, and while doing so to seek answers
and information concerning the following questions:

1. What are some of the values and attitudes held
    by officer cadets?

2. What changes occur in cadets values during Phase
    I training?

3. Do groups of cadets differ significantly from one
    another on the values and attitudes they hold?

Krech, Crutchfield and Ballachey (1962) indicate that the values
and attitudes of an individual reflect his personality. Rokeach (1968)
extends this view in his statement "that beliefs, attitudes and values
are all organized together to form a functionally cognitive system, so
that a change in any part of the system will affect other parts, and
will culminate in behavioral change (p. ix)." The term "attitude" used
in this study refers to what Rokeach (1968) calls an idiosyncrotic
organization of several beliefs focused on a specific object or situ-
ation, inclining one to act in some preferential manner. "Value", on
the other hand is seen as being more basic than an attitude and refers to
a type of belief about modes of conduct or end-states of existence.

Further, Rokeach views personality as an organization of beliefs
or expectancies having a definable and measurable structure and he con-
ceives man's cognitive activities - thinking, remembering and perceiving -
as processes and changes that take place within a person who has already
formed a system of beliefs.

The term "belief system" represents a total framework for under-
standing the universe of a person's beliefs about the physical world, the

social world, and the self and is broader than an ideology. Rokeach
(1960) conceives of belief systems as being organized along three major
dimensions: a belief-disbelief dimension, a central-peripheral dimension
and a time perspective dimension. A belief system can be further analyzed
in terms of subsystems. One subsystem is an attitude; it is organized
around an object or situation which is, in turn, embedded in a larger
subsystem, and so on.

A major emphasis in this research project was the attitude of
authoritarianism in the military viewed in the perspective of cadets'
value-attitude systems. Rokeach's (1954, 1956, 1960) concept of dogmatism
was put forth as a generalized theory of authoritarianism (regardless of
ideological content) as opposed to specific or right authoritarianism
measured by the California F Scale (Adorno, Frenkel-Brunswick, Levinson,
and Sanford, 1950). Rokeach's theory advocates the more closed a person's
belief system, the more difficulty he has in discriminating between the
information received and its source (authority).

The rationale for hypothesizing that a relationship exists between
leadership performance, and the value and attitude structure of a cadet
was based on the research of Sanford (1950), Christie (1952), Hollander
(1954, 1964), French and Ernest (1955), Kemp (1960) and others. Sanford
provided a link between authoritarianism and orientation to leadership
while Kemp studied expressed values and found over a six year period that
the most authoritarian group increased in political and economic values and
decreased markedly in social values. Kemp further found that this very

same group more often entered military and commercial careers. The findings of the present study interpreted in the context of Rokeach's (1968) Theory of Beliefs, Attitudes and Values and the related leadership theory of Hollander and Julian (1968) should provide new knowledge and insights about Phase I officer cadets personalities. In addition it is believed that these findings will benefit recruiting officers, personnel selection officers and cadet training staff respectively in their distinct dealings with potential cadets and cadets in training.

CHAPTER II

THEORETICAL FRAMEWORK AND RELATED LITERATURE

An interest in individual belief systems, military training en-
vironments and democratic ideals led to the present study. Harvey (1966)
points out that western societies such as our own place considerable con-
sensus on flexibility, encouragement of free expression of feelings and
encouragement of individual and intellectual responsibility. Chapter II
attempts to establish a coherent theoretical perspective incorporating
belief-value-attitude, conceptual systems, and leadership theory. A
theoretical base of this breadth is considered essential for comprehending
the studies reviewed concerning values, self-concept, dogmatism and
authoritarianism.

Thomas and Znaniecki (1918) first proposed that the study of
social attitudes should be the central problem of social psychology.
Rokeach's (1968) theory seriously questions this focus on attitudes and
attitude change and he convincingly documents that this central position
so longly held by the attitude concept should be replaced by the value
concept.

Rokeach's Theory of Beliefs, Attitudes, and Values

The Organization of Belief-Disbelief Systems. According to Rokeach
(1960) the total belief-disbelief system is an organization of verbal and
nonverbal, implicit and explicit beliefs, sets, or expectancies which

represents a framework for understanding a person's beliefs about the
physical world, the social world, and the self. It is conceived as being
organized along several dimensions to which additional dimensions can be
added as required by further analysis or empirical research. Referring
once again to the three major dimensions of belief systems discussed by
Rokeach (1960) and mentioned in Chapter I, the belief-disbelief dimen-
sion is based on the assumption that a person's beliefs are organized
into two independent parts: a belief system and a disbelief system.
On this continuum a system is defined as closed to the extent that there
is:

> ...a high magnitude of rejection of all disbelief
> subsystems, an isolation of beliefs, a high
> discrepancy in degree of differentiation between
> belief and disbelief systems, and little differen-
> tiation within the disbelief system (p. 61).

With respect to the central-peripheral dimension:

> ...the more closed a person's belief system, the
> more he should evaluate others according to their
> agreement or disagreement with his system; also,
> the more difficult should it be to discriminate
> between and separately evaluate a belief and the
> person holding the belief. Conversely, the more
> open the belief system, the less should beliefs
> held in common be a criterion for evaluating
> others, and the more should others be positively
> valued, regardless of their beliefs (p. 63).

Finally, on the time-perspective dimension:

> ...a narrow, future-orientated time perspective,
> rather than a more balanced conception of past,
> present, and immediate future in relation to each
> other, is also seen to be a defining characteristic
> of closed systems (p. 64).

To answer the questions posed in Chapter I concerning officer
cadets' values and attitudes, it is now necessary to take a closer look
at the central-peripheral dimension which provides the key in relating
the measures of self concept, authoritarianism, and values used in this
study. Rokeach (1960, 1968) talks about five types of beliefs arranged
on three layers or regions organized along the central-peripheral
dimension.

> (1) A _central_ region represents what will be called
>   the person's "primitive" beliefs. These refer
>   to all the beliefs a person has acquired about
>   the nature of the physical world he lives in,
>   the nature of the "self" and of the "generalized
>   other" (G. H. Mead, 1952).
>
> (2) An _intermediate_ region represents the beliefs a
>   person has in and about the nature of authority
>   and people who line up with authority, on whom
>   he depends to help him form a picture of the world
>   he lives in.
>
> (3) A _peripheral_ region represents the beliefs derived
>   from authority, such beliefs filling in the details
>   of his world map (Rokeach, 1960, pp. 39 - 40).

The "basic truths" about physical reality, social reality, and the
nature of the self are represented by a person's primitive beliefs.
These primitive or central beliefs Rokeach (1968) considers are the
most important. He defines importance in terms of connectedness: "the
more a given belief is functionally connected or in communication with
other beliefs, the more implications and consequences it has for other
beliefs, and, therefore, the more central the belief (p. 5)". In con-
junction with this Eagly (1967), defining a given attitude's centrality

in terms of the number of other concepts dependent upon it, assumes
that an attitude concerning the self-concept is more central than an
attitude that does not concern the self.

Intermediaries or authorities are the people a person turns to
for information to supplement what he can obtain by himself. This im-
plies that the individual concerned accepts the beliefs of the person
in the authority position and the group to which he is identified, i.e.
reference persons or reference groups. However this may not always be
so; Kelman (1958) in an article entitled "Compliance, Identification,
and Internalization: Three processes of Attitude Change" has shown
that subjects exposed to an authority who is in a position to reward
and punish will display a change of opinion in the direction of
authority's opinion, but this change of opinion is manifested only under
conditions of surveillance by authority and is not so under conditions
of non-surveillance.

Mental Organization of Value-Attitude Systems. Rokeach (1968)
logically reasons that there are different numbers of attitudes, in-
strumental values, and terminal values within a person's total system
of belief and that these are all functionally and cognitively connected
and interrelated. This hierarchically connected system of attitudes
and values is believed to be more or less internally consistent, and
will determine behavior. Within the value-attitude system just
described Rokeach (1968) outlines seven separate subsystems:

> First, several beliefs may be organized together
> to form a single attitude focused on a specific
> object or situation. Second, two or more attitudes
> may be organized together to form a larger attitudinal
> system, say, a religious or political ideology. Third
> and fourth, two or more values may be organized to-
> gether to form an instrumental or terminal value
> system...Co-ordinated with the four subsystems just
> mentioned, there are, fifth, the cognitions a person
> may have about his own behavior (or commitments to
> behavior); sixth, the cognitions he may have about
> the attitudes, values, motives and behavior of signi-
> ficant others; and seventh, the cognitions he may
> have about the behavior of physical objects (pp. 162 -
> 163).

Change in Value-Attitude Systems. Rokeach (1968) and his associ-

ates, in an effort to formulate a theory of organization and change

within value-attitude systems started with contemporary consistency

theories and are now groping toward a theory of dissonance-reduction

and dissonance-induction. This theory takes as fact that each person

strives for consistency within and between each and every one of the

seven subsystems represented earlier within the value-attitude system.

Consistency here is defined, primarily, as consistency with self-

esteem and, secondarily, as consistency with logic or reality.

Utilizing a matrix set-up Rokeach (1968, p. 165) shows that there are

at least 28 relations that may be experienced as cognitively incon-

sistent, and in doing so he attempts to position contemporary writers'

theories of balance and attitude change within their respective cells.

Conceptual Systems Theory

A logical extension of Rokeach's Theory of Beliefs, Attitudes

and Values to training environments such as the military can be found in conceptual systems theory. Harvey (1963) implies that Rokeach's theory of personality or cognitive structures may very well parallel his formulations. "Rokeach's (1960)...concept of openness-closedness... leads one to wonder if this dimension may not ultimately prove to be synonymous with concreteness-abstractness...(p. 115)." Research findings of Harvey (1966, p. 49) indicate that his four systems of conceptual complexity can be fairly accurately generated by splitting F and D scale scores at the median into high and low segments and combining them into a 2 by 2 contingency table.

System I subjects tend to fall at the concrete end of the continuum or dimension of developing abstractness and are distinguished as those individuals who scored highest on the Authoritarianism (Adorno et al., 1950, pp. 222 - 270) and Dogmatism (Rokeach, 1960, pp. 71 - 80) Scales.

> System I representatives manifest such character-
> istics as: high absolutism and closedness of
> beliefs; high evaluativeness; high positive
> dependance on representatives of institutional
> authority; high identification with social roles
> and status positions; high conventionality; and
> high ethnocentrism or strong beliefs that American
> values should be instituted as the model for the
> rest of the world (Harvey, 1966, pp. 45 - 46).

System 4 functioning is found at the most abstract end of the continuum and is best represented by those subjects who fall in the cell of low authoritarianism-low dogmatism. Functioning here

> is assumed to evolve from conditions in which the
> trainee is rewarded for exploring and trying the
> different rather than for overt responses that match

>narrowly prescribed standards of the trainer.
Intrinsically valued by the trainer, the trainee
is treated as a person in his own right, is, with-
in the confines of health and safety, encouraged
to be independent and to evolve his own standards
or definitions in regard to values and other, less
hallowed, aspects of his world (ibid, p. 62)...The
System 4 representative who is the recipient of
diversity along with stability as a developing child,
and who is of high perceived self-worth..., comes to
have a highly differentiated and cognitive structure
and consequently to be more flexible, more creative
and more relative in thought and action (ibid, pp. 45-
46).

The Interaction Theory of Leadership

Assimilation into the Canadian Forces operates on the assumption

that personnel selection procedures are able to locate those persons

with the requisite mental, emotional and physical abilities for military

training and service. The personnel selection organization in the

Canadian Forces is only thirty years old, yet it has developed classi-

fication and assignment techniques that have proven valid and reliable

in scientifically screening prospective tradesmen and officer candidates

by means of intelligence and aptitude testing. However, personnel

selection has failed in its attempt to scientifically determine what

makes a good leader. This failure was in part, a theoretical one because

psychologists had sought to identify leadership as specific individual

leadership traits when it is clear that leadership involves an inter-

action between personality attributes and social situations. It was not

until after 1963 that leadership assessment in the Canadian Forces

shifted its emphasis away from the "Trait Theory" to an interaction

theory approach to leadership. Hollander and Julian (1968) describe this most current conception of leadership as follows:

> Leadership in the broadest sense implies the presence of a particular influence relationship between two or more persons. In this view it is conceived as merely one representation of the more general phenomenon of interpersonal influence. The essence of the leader-follower relationship resides in a mutual dependence among persons involved in the pursuit of common goals. To specify this leader influence we must simultaneously consider the interaction of three important determinents: (a) the "leader", with his personality, perceptions, and resources relevant to goal attainment; (b) the "followers", with their personality, perceptions, and relevant resources; and (c) the situational context within which these variables function...(p. 890).

Rokeach's theory of beliefs, attitudes and values coupled with conceptual systems theory incorporated into the Leader-Follower-Situation or Interaction Concept of leadership rounds off the theoretical basis of this study. Harvey's (1966) emphasis on the effects of situational and dispositional factors in system activation and response resolution were united with the concept of authoritarianism (Rokeach, 1956, 1960; Adorno et al., 1950) and value hierarchies (Rokeach, 1968) to critically examine officer cadet assessment methods and outcomes of military training. The next section of this chapter attempts to incorporate the major highlights found in the review of the literature revolving around the theoretical stance taken.

Review of Related Literature

Choosing the military as a career presents special problems to

the vocational counsellor at the Canadian Forces Recruiting Centres where

initial contact is made with possible and interested candidates. Super

(1963) states it this way:

> In expressing a vocational preference, a
> person puts into occupational terminology
> his idea of the kind of person he is; in
> entering an occupation, he seeks to implement
> the concept of himself; in getting estab-
> lished in an occupation, he achieves self-
> actualization (p. 1).

Do those who choose the Canadian Forces as a career have a set

of values and attitudes motivating them that is quite distinct from those

who do not choose this vocation? Can an officer cadet value-attitude

system be distinguished that will give some understanding of the

motivations behind their vocational choice? The relationship between

values and motives is summed up nicely by Kluckhohn (1951), when he says,

> ...any given act is seen as a compromise between
> motivation, situational conditions, available
> means, and the means and goals as interpreted in
> value terms...Motivations and values are both
> influenced by the unique life history of the
> individual and by culture (p. 403).

The purpose of the literature review in this section will be to look for

guide lines in answering the questions just posed along with the central

questions presented in Chapter I.

Earlier it was mentioned that Rokeach places the value concept

ahead of attitude. The considerations that lead Rokeach to this con-

clusion are worth reiteration as these have been influential in the

writer's thinking and undoubtedly will influence interpretation of

findings.

> First, value seems to be a more dynamic
> concept since it has a strong motivational
> component as well as cognitive, affective
> and behavioral components. Second, while
> attitude and value are both widely assumed
> to be determinents of social behavior, value
> is a determinent of attitude as well as of
> behavior. Third, if we further assume that
> a person possesses considerably fewer values
> than attitudes, then the value concept pro-
> vides us with a more economical analytic
> tool for describing and explaining similarities
> and differences between persons, groups, nations,
> and cultures...While attitudes seem to be a
> specialized concern mainly of psychology and
> sociology, values have long been a centre of
> theoretical attention across many disciplines -
> philosophy, education, political science,
> economics, antropology, and theology as well as
> psychology and sociology (Rokeach, 1968, p.
> 157).

Value Studies

The military profession is not characterized by a monolithic
value structure which remains unchanged. To the contrary, a variety
of research, reported by Janowitz (1960, 1964, 1965), indicates a shift
in recent years in the professional orientation of the American military
from a "heroic" to a "managerial" emphasis. Janowitz (1960) explains
that this fact is not readily recognized by society in general.

> The civilian image of the professional soldier
> remains firmly rooted in the past. His style
> of life, his day-to-day tasks, and his aspir-
> ations change as the technology of war is trans-
> formed. Yet, outdated and obscure conceptions
> of the military establishiment persist because
> civilian society, including the alert political
> public, prefer to remain uninformed. Military

officers, especially those who occupy posts
at the highest echelons, are only dimly per-
ceived as persons, decision-makers, and poli-
tical creatures (Janowitz, 1960, p. 1).

The "heroic leader" is "a perpetuation of the warrior type", in
contrast with the "military manager" who "reflects the scientific and
pragmatic dimensions of war-making" and has "effective links to civilian
society". The integration of these two styles of leadership is essential
to the maintenance of cohesion within the profession. Yet changing tech-
nology and increasingly complex organizational relationships have forced
the military to re-assess various professional goals and practices. The
process of re-assessment produces continuing tension between the "heroic
leader", orientated toward the preservation of a traditional profession-
al self-image, and the "military manager" orientated toward the modifi-
cation of the image in the direction of greater emphasis upon expertise
equal to the tasks of large-scale management (Janowitz, 1960, pp. 21 -
36).

In 1956 Guba and Getzels administered the Kuder Preference Record
and the Allport-Vernon-Lindzey Study of Values to over 200 Air Force
officers assigned to instructional duty. Of the total of 198 officers
who completed the Kuder, 123 were "rated" i.e., on flying status, and
75 were "non-rated" i.e., performed non-flying functions within the
Air Force. A total of 213 officers, undifferentiated as to rating,
most of whom contributed Kuder scores, also provided Study of Values
scores. The purpose of the study was to seek answers to the following

questions: "What differences exist between rated and non-rated personnel...? How do rated military personnel differ from civilian aviators? What significant areas of difference exist between Air Force officers and men in general? (p. 466)."

The major conclusions drawn from the data collected were as follows: On the nine Kuder scales no significant difference was found between rated and non-rated officers even though these two groups of officers performed widely differentiated duties; the interest pattern for all officers (here rated and non-rated were treated as a single sample) versus men in general showed that the officer group achieved significantly lower scores on the Computational, Literary, and Clerical scales, and a significantly higher score on the Persuasive scale; findings for rated officers (primarily pilots) compared with those of civilian pilots indicated the latter scored significantly lower on the Persuasive and Social Service scales, and significantly higher on the Mechanical, Scientific, Literary, Musical, and Clerical scales. On the Study of Values instrument a normative group of 851 college students was used as a basis of comparison for the officer sample. Even though the majority of the officer sample had at least some college training, and many were college graduates there were significant differences noted for five of the six Study of Values scales. Officers scored higher on the Economics, Political and Religious scales, and lower on the Aesthetic and Social scales, while the Theoretical scale showed no significant differences.

The findings of Guba and Getzels are given additional meaning in light of the work of Kemp. Kemp (1960) studied the changes of expressed values in which he was interested in determining whether changes in values and behavior were a function of personality. The subjects, who were all religiously minded persons enrolled in a training curriculum designed to prepare them for Boy Scout executive positions or YMCA or YWCA secretaries positions, were administered the Allport-Vernon Scale of Values while still in college in 1950. The same subjects were contacted six years later and this time given the Dogmatism Scale, and retested with the Allport-Vernon Scale. In 1950 the closed, middle, and openminded subjects all expressed identical value patterns, but in 1956, the rank order of values remained the same for the middle group only, and had changed for the closed and open groups.

> Although religious values were still predominant
> in all groups, the closed group increased in
> political and economic values and decreased
> markedly in social values. The open group re-
> mained unchanged in its religious and social
> values but increased in theoretical values and
> decreased in economic and political values.
> ...The vocational choices...follow closely these
> changes or non-changes in value patterns.
> Roughly 70 per cent of the middle group became
> Boy Scout executives as planned, or entered closely
> related professions. But most of the open and
> closed subjects changed their vocational choice
> after leaving college; the open subjects more
> frequently entered vocations requiring more ad-
> vanced professional training in careers in-
> volving social welfare, and the closed subjects
> more frequently entered military and commercial
> careers of an administrative nature (pp. 345 -
> 346).

Another study that is of importance here is one conducted by Scott (1965) who sought to determine the relationship between student values and organizational involvement. Among his many findings of the relationship between moral values and students membership in Greek letter fraternities and sororities the following have particular relevance to this study: the initial values of freshmen help determine whether they will join Greek organizations; organizations tend to recruit new members with values similar to those of old members; members' values are most similar to the values of other members' whom they like; departure of a member from a group is likely to reflect an incompatibility between his values and the organizational norms; and attrition among new members is highest in organizations where selective processes have resulted in poorest value match with old members. Essentially Scott's findings indicate that there is a relative degree of homogeneity of those values measured within organizations. A further significant finding was that even though normative pressures organizations were not successful in bringing about value change, thus value deviates usually withdrew from the organizations.

The results of studies by Fensterheim and Tressett (1953), French (1956) and Smith (1957) further indicate that individuals favor social interaction with those persons who are perceived as holding similar values.

Petersen and Lippitt (1960) did a comparison of behavioral styles between entering and graduating students in officer candidate school and

Bronzo and Baer (1960) found they could predict 73% of the freshman

Air Force Reserve Officer Training Corps (ROTC) dropouts or non drop-

outs by previous knowledge of cadets interpersonal values and bureau-

cratic tendencies. Both studies support the findings of the interest

and value studies already reported.

The validity of Rokeach's approach to the measurement and theory

of values systems is limited because of the newness of the theory and

the instrument. In 1968 Rokeach spent a week at the University of

Alberta during which time he delivered four public lectures which

dealt with his current research on the relationships between values

and behavior, and between values and attitudes. Much of the content

of his talks is summarized in Rokeach's (1968) book and in his as yet

unpublished paper entitled "The Measurement of Values and Value

Systems". Hague (1968) and Piche (1968) both used the Allport-Vernon-

Lindzey Study of Values and the Rokeach Value Survey instruments in

their research. They found, among other things, that both priests

and catholic women in religious orders have homogeneous value patterns

and that the two value instruments complemented each other very well.

Studies of the Self-Concept

The primary purpose of the present study regarding the adminis-

tration of self-concept measures is to examine congruence between con-

cepts of self and ideal self (S-I Congruence) and its relationship to

rated performance of officer cadets. The fact that behavior is

influenced by the formulations of the self and ideal-self is evidenced by the writings of many personality theorists. Wylie (1961, 1968) reviewed over 400 studies in this area alone!

The relationship between S-I congruence and adjustment is not clearly defined in the literature. Rogers (1951) suggests that a linear relationship exists between S-I congruence and adjustment while other researchers such as Block and Thomas (1955) and Park (1968) have indicated that the relationship between the variables is curvilinear, and that a moderate discrepancy would be more optimal than none at all. Investigations of both the linear and curvilinear relationships of these variables suggests the possibility of an optimal range of S-I congruence. This rationale is explained by Block and Thomas in the following manner:

> It is granted that to admit dissatisfaction
> with one's self is indicative of maladjustment.
> But are individuals expressing extreme self-
> satisfaction as representative of an optimal
> level of personality integration when this
> self-satisfaction is based upon repressive
> mechanisms? Much depends of course on the con-
> cept of adjustment to which one adheres. How-
> ever, most psychologists would agree in con-
> sidering a suppressive, repressive mode of
> adaptation as less than adequate. In a sense,
> such a person may be said to be "overly-
> integrated", a condition sufficient enough
> for a stable and benign environment where pres-
> sures on the individual never become too great,
> but one which is incapable of manifesting the
> adaptive flexibility and resiliency of a less
> rigid personality structure (p. 254).

Turner and Vanderlippe (1958) compared a group of twenty-five

university students with high S-I congruence with another group of twenty-five students with low S-I congruence; they found that the former group was significantly higher in adjustment, as rated by the SIC Q sort, than the low congruent group. Additional findings showed that the high S-I congruence group received higher sociometric ratings from their peers, attained higher scholastic averages and participated in more extracurricular activities. On the Guilford-Zimmerman Temperament Survey this group also appeared as being better adjusted since their scores were higher in the areas of general activity, ascendance, sociability, emotional stability, and thoughtfulness.

Another study by Hay (1966) found high S-I congruence engineering managers were more effective in their performance of duties than those with low S-I congruence. This finding was interpreted as offering support to a linear relationship between S-I congruence and job adjustment.

What about the impact of military basic training on the self-concept of recruits? Christie (1952) found in his research on 48 squads of novice soldiers that there was an improvement in the recruit's personal adjustment - as measured by his perception of himself as being in good physical and psychological condition - and in positive relation to his peers. Thus basic training did succeed in developing self-esteem and a sense of social solidarity among recruits. Another relevant finding of Christie's was that attitudes toward the institutional aspects of military life and authority figures in the Army (officers

and non-commissioned officers) became more negative.

Military training for both officers and men places a major emphasis on physical and mental endurance. Clifford and Clifford (1967) completed a study using as subjects thirty-six adolescent boys enrolled in an Outward Bound summer camp with the aims of building physical stamina and pushing each individual to his physical limit. Measures of self-concept were obtained before training and one month later at the end of the experience. The findings indicated that overall changes in the self-concept occurred and that discrepancies between the self and the ideal-self became smaller.

Adorno et al (1950) compared high and low F scale scores in relation to self and ideal-self measures:

> Lack of insight and of self-criticism on the part of the typical high scorers is revealed in their tendency to mention as the type of person they could wish to be, as their self-ideal, the same set of traits which they actually ascribe to themselves. There is hardly any discrepancy between their image of what they ought to be and their conception of what they really are...Low-scoring subjects...tend to mention, as their ideal traits which are different from, or at least differently conceived from those which they ascribe to themselves. Being basically more secure, it seems, they can more easily afford to see discrepancy between ego-ideal and actual reality. Seeing this discrepancy enables them to strive toward a better fulfillment of the ego-ideal (pp. 430 - 431).

Further personality correlates of military career choice were found by Kaplan (1962) in a study utilizing 100 lieutenants, non-flying officers and graduates of the Air Force Reserve Officers

Training corps (ROTC) program. Half the sample intended to make the

Air Force a career and the other half planned to leave after a minimum

period of service. The findings indicated that differences between

career and non-career officers were more than mere reactions to the

immediate military experience and were deeply rooted in personality

dynamics. Kaplan hypothesized and confirmed in all areas the military

career personality as follows:

>...that career officers would reveal greater
> preoccupation with personal security, less
> desire for personal independence of action,
> less confidence in occupational self-
> sufficiency in civilian life, and more posi-
> tive feeling toward military status symbols
> than would non-career officers, as well as
> less desire for individual recognition, greater
> confidence in their own supervisory capacities,
> and greater acceptance of authority or super-
> vision (p. 298).

Interpersonal Check List and Self-Ideal Congruence Studies. La

Forge and Suczek (1955) designed the Interpersonal Check List (ICL) to

measure a number of variables defined by the Interpersonal Personality

System explained in Leary (1957). Leary suggests discrepancies between

the self and ideal-self concept indicate either self-acceptance or self-

rejection, while La Forge and Suczek indicate that these discrepancies

can be used to determine motivation for change.

The number of studies investigating the structure and application

of the ICL is not extensive. Two-week test-retest correlations for 77

obese women indicated a .78 reliability coefficient for the octants

and a .73 for the sixteenths; La Forge and Suczek found test-retest

correlations varying from .73 to .81 on the octants and from .64 to .83 on the sixteenth scales. Kuder-Richardson estimates of internal reliability of the ICL ranging from .95 to .97 for self and ideal-self measures were found by Armstrong (1958).

Only two studies were found which were pertinent to the construct validity of the ICL for inferring subjects self-concept, while none were found for inferring subjects ideal-self concept. One of these studies by Crandall (1969) related a person's self-concept to tolerance and intolerance to ambiguity while the other, by Meers and Neuringer (1967) dealt with and confirmed the hypothesis "that a congruence...between the public image projected by an individual...and his self-appraisal leads to behaviors that reflect an adherence to and dependency upon socially sanctioned and approved mores (p. 237)". The results were interpreted as confirming this portion of Leary's Interpersonal Theory of Personality.

One limitation of the ICL as a measure of the ideal-self concept is voiced by Leary (1957).

> The measurement of ego ideal employing the interpersonal adjective check list is somewhat limited because of the tendency of all patients to stereotype their ideals. In one sample of 207 routine clinic intake patients, 53 percent placed their ego ideal in the managerial octant and 37 percent in the responsible-hypernormal octant. This means that 90 percent of all patients had ego ideals in the upper right hand quadrant and less than 2 percent placed their ego ideal in the lower (weak) half of the diagnostic scale (p. 205).

Dogmatism and Authoritarianism Studies

Rokeach's concept of dogmatism was put forth as a generalized theory of authoritarianism (Fruchter, Rokeach, and Novak, 1958; Rokeach, 1956, 1960; Rokeach and Fruchter, 1956) as opposed to specific or right authoritarianism as measured by the California F Scale (Adorno et al., 1950). Rokeach (1960) indicates the distinction between right and general authoritarianism by a study which computed correlations between scores on the Dogmatism Scale, the F Scale and two measures of liberalism-conservatism. Negligible correlations between D scores and liberalism-conservatism tests support the conclusion that the D Scale is measuring general authoritarianism, while higher F Scale correlates with the same liberalism-conservative measures support the fact that the F Scale is measuring right authoritarianism (high F scorers being the more conservative). In addition computed correlations between F and D Scale scores ranged from .54 to .77.

By 1958 Christie and Cook already reviewed 230 studies concerning the F Scale and the "Authoritarian Personality"; Vacchiano, Strauss and Hochman (1969) summarized 139 studies revolving around research on Rokeach's concept of dogmatism; and Roghmann (1966) published a 439 page document which replicated many research findings from the United States concerning the social correlates of dogmatism and authoritarianism in addition to testing a number of new hypotheses from

the field of political behavior and of the behavior in military

organizations and military primary groups.

Dogmatism Studies. A recent study that supports the broad

theoretical stance taken in this work is one reported on by Clark (1968)

which sought to determine whether Kerlinger's and Rokeach's (1966)

factor analytically derived measure of authoritarian attitudes (the F

and D scale) would differentiate field independent from field dependent

subjects. The findings indicated that the high F and D scorers required

significantly more time to complete the Jackson's Short Form of the

Embedded Figures Test (were more field dependent) and obtained lower

School and College Ability Test verbal and total scores (were less

intelligent) than the low F and D scorers. These results were inter-

preted as resulting from the two F and D groups contrasting cognitive

styles and are congruent with the works of Harvey, Hunt and Schoder

(1961), and Harvey (1963, 1966) concerning Conceptual Systems Theory.

What are the relationships of dogmatism to personality patterns

and interpersonal and group behavior? The Plant, Telford, and Thomas

(1965) study compared high and low dogmatism scale scorers on the

Allport, Vernon, Lindzey Study of Values and five scales of the

California Psychological Inventory (CPI). Low scores on the D Scale

were described from the outcome of their CPI as being outgoing and

enterprising, calm, mature and forceful, efficient and clear-thinking,

responsible and more likely to succeed in an academic setting while

high D Scale scorers were found to be psychologically immature and

characterized as being impulsive, defensive, and stereotyped in their thinking. This study did not show a significant difference between the groups on the value measure as did Kemp's (1960) study.

Korn and Giddon (1964) also utilized the CPI and concluded that the more dogmatic an individual the less tolerant, flexible and secure.

The interaction of student leaders with their supervising teachers and types of leadership in the classroom are the themes of the next two studies to be reported on in looking at dogmatism and inter-personal and group behavior. While these studies were not undertaken on military populations the results seem relevant to the training of officer cadets.

Johnson (1969) found that student teacher dogmatism was a function of the degree of dogmatism of the supervising teacher and that a significant change in dogmatism scores of student teachers did occur during the student-supervisor interaction period. Over the pre-test - post-test period 53 of the 80 student teachers moved towards the super-vising teacher on the variable of dogmatism while the other 27 moved in the opposite direction.

The purpose of a study completed by Tosi, Quarante and Frumkin (1968) was to investigate the relationship between open-mindedness and closed-mindedness of forty student teachers in their perceptions of ideal classroom leadership. Fourth year student teachers were ad-ministered the Rokeach Dogmatism Scale, Form E, and an instrument de-signed to measure leadership styles. The results indicated that the

open-minded students significantly preferred a democratic style of leadership as compared to closed-minded students.

A group's effectiveness is a function of many variables some of which are: organizational, technical, motivational, personal and interpersonal. Greer (1961) in a series of four field research studies involving 272 Army infantry Rifle squads and Air Force Crews studied group performance from the perspective that "the more a leader satisfied the needs of his men, the harder they will work for him on the field problem, and therefore the better the group will perform (p. 1)". Three hypotheses concerning the leader as a problem solver, the similarity between leader and his men on authoritarianism, and the role discrepancy between the leader as meeting the role expectations his men had for an ideal leader were tested and found to be significant in initial and replicated studies. A 16 item Equalitarian Index was used to categorize individuals responses as either authoritarian or equalitarian and the findings of this measure indicated that leaders were significantly less authoritarian than their men.

Authoritarianism Studies. There have been a number of interesting studies completed relating authoritarianism to leadership emergence and followership. Sanford (1950) has provided a link between authoritarianism and orientation to leadership and Christie (1952) has established a relationship between acceptance within military trainee groups in an army basic training unit and shifts in authoritarian scores accompanying training. The findings of these studies suggest that an

individual's choice of a leader is related to his authoritarianism,
and that, within a military context, individuals who show an increase
in their authoritarianism scores during training tend to be more readily
assimilated into the organizational structure.

A validity study by Titus (1968) in which he found only a
minimal relationship between F Scale scores and peer perceptions of
authoritarian behaviors yields a suitable introduction.

> Any consideration of the validity of the
> California F Scale must specify the manner
> in which the writer views authoritarianism.
> Hollander (1954) has noted that "authoritarianism"
> may be conceived of in three primary ways: (a)
> as an ideology, (b) as a set of behaviors, or
> (c) as an institutional form. Since each of these
> forms connotes something different from the
> others, one cannot assume that if the F Scale
> validly measures one form of authoritarianism,
> it will necessarily measure validly the other
> two. Available evidence (Campbell and McCandless,
> 1951; Flowerman, Stewart and Strauss, 1950;
> Goldstein, 1952) suggests that F-scale scores
> adequately reflect prejudice and ethnocentric
> ideology. In addition, evidence has been presented
> indicating cultural (Cohn and Carsch, 1954; Protho
> and Mclikian, 1953) or subcultural (Bass, McGehee,
> Hawkins, Young, and Gebel, 1953; Christie and
> Garcia, 1951) influences on F-scale scores. It has
> been observed, however, that "...The F Scale cor-
> relates most systematically with other pencil and
> paper measures, and least systematically with inter-
> personal behaviors, particularly as situational con-
> ditions are varied" (Titus and Hollander, 1957,
> p. 62). (Titus, 1968, p. 395).

Hollander (1954) did a study to determine the relationship be-
tween F Scale scores and leadership status among 268 officer indoc-
trinees. His major hypothesis was that there would be a significant

positive relationship between scores on the F Scale and leadership
acceptance by peers. He tested this relationship by correlational and
chi-square analysis, and found a significant negative relationship.
Subjects nominated as "highest" on leadership were significantly lower
on authoritarianism, irrespective of the standing on authoritarianism
of those making the nominations. One suggestion offered to explain this
relationship was that a high score on the F Scale might be indicative
of lack of social intelligence or social perception. Thus, individuals
who are "authoritarians" in the F Scale sense are unable to deal
effectively with the needs of others and therefore tend to be rejected
as leaders by potential followers. Hollander also reports that there
is some empirical evidence to the fact that selection boards in the
Air Force tend to select for promotion the less authoritarian officers,
presumably, in part, through selecting well-liked men.

Scodel and Mussen (1953) investigated the accuracy with which
authoritarian and non-authoritarian individuals are able to estimate
each other's real attitudes. They hypothesized that, after a period
of social interaction between an authoritarian and a non-authoritarian
person as determined by individual scores achieved on the F Scale,
that the authoritarian would perceive the other person as being like
himself in social and emotional attitudes, whereas the non-authori-
tarian individual would perceive the other person more accurately. The
results of the study confirmed the hypothesis, high authoritarians
"projected" their own attitudes while non-authoritarians were better

able to estimate their partner's attitudes correctly.

Assuming the authoritarian and traditional dimensions of the military establishment Campbell and McCormack (1957) hypothesized that air cadet training would increase authoritarian predispositions among officer candidates. This was based on Adorno's et al (1950) findings that authoritarian personality tendencies imply both the predisposition to arbitrarily dominate others of lower status, and simultaneously to submit to arbitrary higher authority. The results of the research measured by the F Scale, showed, on the contrary, a decrease in authoritarian traits among cadets after one year of training. The fact that combat flight training requires an emphasis on group interdependence and on team concept of co-ordination to insure survival and success supports the interaction theory of leadership that the next few studies will now explore in more depth.

The Leader-Follower-Situation concept of leadership forms the basis for leadership evaluation and training in the Canadian Forces. Haythorn, Halfner, Langham, Couch and Carter (1956) did a study designed to investigate a specific case of interaction between leaders' and followers' personalities in the determination of behavior in groups. They found that group members' behavior was affected by the personalities of the other members and that subjects low in authoritarianism were more likely to choose leaders who were friendlier and less controlling than were individuals high in authoritarianism. The latter were more satisfied and performed better in a centralized and

hierarchical power structure. These findings parallel the results

obtained by Crockett (1953) who found that more authoritarian para-

troopers preferred more authoritarian officers than other leaders.

Military, church, and industrial organizations with their

hierarchical chains of command operate in a fairly authoritarian

manner and presumably individuals predisposed to accept authoritarian

ideology should accept and reflect ideas on attitudes and behavior

which their organizations hold. In this light, French and Ernest

(1955) did two studies concerning the relationship between "authori-

tarianism" and the acceptance of military ideology. They administered

the California F Scale, a Military Ideology Scale, and question about

Air Force career intentions to a group of 186 airmen undergoing basic

training, and a group of 272 officer cadets attending officer candi-

date school, respectively. The findings indicated that individuals

scoring high on the F Scale tend to be accepting of military ideology.

In addition it was found that the relationship was greater when only

items, dealing with attitudes to authority, conventionalism, and hard-

headedness were used than when those items dealing with the other

dimensions of the F Scale were included. It is worthwhile noting that

the theory that this hypothesis was based on does not necessarily lead

to the opposite prediction that "equalitarian" individuals will reject

the military. A second hypothesis that F Scale scores could identify

men who plan to make a career of the services was not significant al-

though F Scale and career intention correlations were postive as expected.

Finally, over pre and post test results F Scale responses were found to be unchanged by military training.

The interrelationship of authoritarianism, leader acceptance, and group cohesiveness was the focus of a study completed by Medalia (1955) aimed at throwing light on the Frommian hypothesis that authoritarianism is the differentiating factor in leader-centered versus member-centered group cohesiveness. The findings indicated as expected that more high F scorers than low apparently accept or idealize their formally designated leader, and that in groups of high F scorers the attractive force of the group is stronger. However, the predicted strong positive relationship between leader acceptance and group cohesion for high authoritarians was not found.

The training of military managers and the emphasis placed on the managerial values of planning, flexibility and innovation implies that mastering new roles and adapting to new situations is a must for career progression. Getzels and Guba (1955) investigated role conflicts encountered by regular and reserve officers in switching from soldier to student and from student to teacher by studying the instructional staff at the Air University. He found that the more authoritarian officer was under greater role conflict and performed less within his capability as a teacher. Contrary to expectations, the Air Force regular officers were less troubled by the role conflicts caused by shifting from operational tasks to a teaching assignment than the reserve officers.

The findings of the value and attitude studies reported here indicate that the military organization is manifold and that the co-ordination of a complex group of tradesmen with diverse personalities cannot be guaranteed simply by authoritarian discipline as is so often believed. Members of the military recognize their greater mutual dependence on the technical and interpersonal skills of their team members, and are striving through an active research program to expand their knowledge of their organization, environment, and inter-dependent relations.

Chapter II was devoted to a review of the literature pertaining to Rokeach's theory of beliefs, attitudes and values; conceptual systems theory; the interaction theory of leadership, and officer cadet leadership performance. Chapter III presents two hypotheses concerning S-I congruence and authoritarianism and describes the study's research design, instrumentation, adminstrative procedures and statistical tests.

CHAPTER III

RESEARCH DESIGN, INSTRUMENTS, AND PROCEDURES

The works of Rokeach (1960, 1968) form the central theoretical basis of this study, thus the definitions of value, value system, attitude, and dogmatism are Rokeach's while the definition of authoritarianism and those definitions concerning the self-concept are taken from independent theories that were incorporated into the theoretical stance of Rokeach.

Definitions

Value is a type of belief, centrally located within a belief system, about how to behave or about an end-state of existence which a person considers worth or not worth attaining. Kluckhohn (1951), Smith (1963), and Williams (1967) definitions of value are also compatible to this one.

A value system or value hierarchy is the rank order of a person's values in terms of their importance to him. An additional distinction is made in this research between terminal values (the end-states worth attaining) and instrumental values (how one ought to behave).

Dogmatism is defined by Rokeach (1954) in the following manner as:

> (a) A relatively closed cognitive organization
> of beliefs or disbeliefs about reality (b) or-
> ganized around a central set of beliefs about
> absolute authority, which, in turn (c) provides
> a framework for patterns of intolerance towards
> others (p. 195).

Authoritarianism is used in this study as viewed by Adorno et
al (1950),and is a syndrome of personality characteristics which is
characterized by rigidity, stereotypy, conventionality, concreteness
of thought, intolerance to ambiguity, exaggerated loyalty and affection
towards parents and members of the in-group and hostility toward the
out-group. The non-authoritarian pattern is characterized by
affectionate, basically equalitarian and permissive interpersonal
relationships indicating flexibility and readiness to accept and face
one's weaknesses. The non-authoritarian has greater ability to inter-
nalize and thus tends to be more creative and imaginative in both
cognitive and emotional spheres.

Self-Concept (S) refers to those perceptions or attitudes an
individual has of himself.

Ideal-Self-Concept (I) refers to how an individual would like
or prefer to be.

Self-Ideal-Self (S-I) Congruence refers to the degree of global
similarity existing between the self and ideal-self concepts. S-I (16),
S-I (8), and S-I (4) are ICL congruence scores (see p. 43).

Officer Cadet Performance. The leadership ability of a cadet in
this study is classified according to his total grade as above average
(top 25%), average (middle 50%), and below average (bottom 25%). Grades
are operationally defined by rated performance of individual cadets on
three components: military skills and knowledge (20%), peer ratings
(30%), and cadet scores or grades on 22 critical requirements

considered essential for leadership evaluation (50%).

Hypotheses

It is assumed that an individual's values and attitudes reflect his personality and that changes in his values and attitudes culminate in behavioral change. The purpose of this study was to look at the military environment and those officer cadet characteristics considered relevant to leadership performance. In addition to the descriptive data gathered concerning officer cadet grades, military experience, career intentions and values, the following hypotheses concerning S-I congruence and authoritarianism were proposed on the basis of the literature review in Chapter II and the theoretical formulations of Rokeach (1960, 1968), Adorno et al (1950) Harvey et al (1961), Leary (1957) and Hollander (1964).

Hypothesis 1 - Cadets whose leadership ability was classified as above average, average, and below average, differ significantly on S-I congruence as determined by S-I (16), S-I (8) and S-I (4) scores when pre test responses are controlled.

Hypothesis 2 - The three groups of cadets referred to in Hypothesis 1 differ significantly on authoritarianism as determined by F and D Scale scores when pre test results are controlled.

The Experimental Design and Instrumentation

The hypotheses just posed were tested by utilizing a one sample pre-test - post-test design discussed by Campbell and Stanley (1963,

pp. 7 - 12). On May 30, 1969, and again on August 27, 1969, sixty-six

Reserve Officer University Training Plan (ROUTP) cadets undergoing

sixteen weeks of military leadership training at the Canadian Forces

Base in Shilo, Manitoba were administered the following four instru-

ments:

    1. Rokeach's Dogmatism Scale, Form E.

    2. Rokeach's Value Survey, Form E.

    3. Adorno's et al F Scale, Forms 45 and 40, and

    4. La Forge's and Suczek's Interpersonal Check List,

        Form IV.

These measures are reproduced in Appendices A-3, A-4, A-5, and

A-6 respectively, along with a questionnaire in Appendix A-7 which was

administered for descriptive purposes.

The Value Survey Instrument. To complete Form E of this instru-

ment the subjects were presented with two mimeographed pages of values,

the first containing the 18 alphabetically arranged terminal values

and the second containing the 18 instrumental values, also alpha-

betically arranged. For each set of values, the officer cadets were

asked to rank them from 1 to 18, from most to least important. Rokeach

in a pre-publication copy of a paper entitled "The Measurement of

Values and Value Systems" discusses the historical development of the

five forms of the Value Survey instrument as well as numerous studies

pertaining to its reliability and validity. This same paper reports

Form E (N = 189) median reliabilities of .74 and .65 for terminal and

instrumental values respectively.

The Dogmatism Scale. The D Scale measures structure (how a person believes) and individual differences in openness or closedness of belief systems as well as serving as a measure of general authoritarianism and general intolerance. The Scale went through five editions, and the latter edition, Form E, which was used in this study consists of forty statements (Rokeach, 1960, pp. 73 - 80). The instrument is a Likert type scale which is scored by the method of summated ratings, with scores ranging from 40 to 280, a high score representing extreme closed-mindedness and a low score indicating an open mind. Rokeach (1960, p. 89) reports reliability figures ranging from .68 to .93 and this is further substantiated by Ehrlich (1961) who reports split half and five to six months test-retest reliabilities of .75 and .73 respectively.

The California F or Fascism Scale. Adorno et al (1950, pp. 222 - 279) designed the F Scale to measure the content (what a person believes) of individual belief systems and viewed attitudes towards politics, economics and society as manifestations of the total personality, and considered "fixity" and "flexibility" as two extremes of a personality continuum. The "third F Scale" used in this study is made up of items taken from Forms 45 and 40 and consists of twenty-nine items, twenty-eight of which were used in this research. The item "It is best to use some pre-war authorities in Germany to keep order and prevent chaos", was omitted because it was felt to be

outdated. The average of the reliability coefficients for the F Scale

is .90, ranging from .81 to .97 (ibid., p. 257).

The Interpersonal Check List (ICL). La Forge and Suczek (1955)

designed and developed the ICL which was used in the present study to

measure officer cadet's view of self and world, his view of ideal-self

and his standards, and finally as a measure of self-acceptance.

The ICL, Form IV, contains 134 items, of which only 128 were

scored. Each of these 128 adjective traits has been classified into

sixteen personality dimensions (A, B, ..., P). Figure 1 is reproduced

from Leary's Interpersonal Theory (Leary, 1957, p. 65). This theory

holds that like personality variables are nearest one another, and

unlike variables are opposite one another. Wiggans (1960) discusses

the scoring of the ICL by calculation of summed intensity "sixteenths"

ICL (16). This procedure involves the addition of intensities assigned

to those responses marked "true" by the subject. Each sixteenth con-

tains one "1", three "2", three "3" and one "4" intensity weighted

items whose intensity measures social desirability. Adjectives rated

"1" are intended to represent "a mild or necessary amount of a trait",

while adjectives rated "4" are associated with "an extreme or highly

inappropriate amount of a trait". Therefore it is possible to obtain

scores from 0 to 20 on a given sixteenth. ICL (8) scores are ob-

tained by adding adjacent sixteenth scores to obtain octants of which

the "Managerial-Autocratic" is an example. ICL (4) scores are ob-

tained by adding selected sixteenth scores to obtain four factors

after Eberlein (1969): Docility, Rebelliousness, Competition and Responsibility.

S-I congruence scores for the subjects were determined by vector analysis techniques which calculated S-I discrepancies utilizing the following formula:

$$\left| \text{S-I} \right| = \sqrt{\sum_{i=1}^{n} (S_i - I_i)^2}$$

where S and I are vectors of self and ideal-self concept scores respectively. High S-I discrepancies are associated with low S-I congruence, while low S-I discrepancies are associated with high S-I congruence.

MANAGERIAL–AUTOCRATIC

COMPETITIVE–NARCISSISTIC

RESPONSIBLE–HYPERNORMAL

AGGRESSIVE–SADISTIC

COOPERATIVE–OVERCONVENTIONAL

REBELLIOUS–DISTRUSTFUL

DOCILE–DEPENDENT

SELF-EFFACING–MASOCHISTIC

BOAST, ACT PROUD, NARCISSISTICALLY, EXHIBITION-ISTIC

DOMINATE, BOSS, ORDER

SEEKS RESPECT COMPULSIVELY, PEDANTIC, DOGMATIC ACTIONS

TAKES RESPONSIBILITY COMPULSIVELY, HYPERNORMAL ACTIVITIES

EXPLOIT, REJECT, WITHHOLD

PROVOKES INFERIORITY

PROVOKES OBEDIENCE

PROVOKES RESPECT

PITY, DOTE ON, SOFT-HEARTED BEHAVIOR

PROVOKES DISTRUST

ACT CONFI-DENTLY, INDEPEN-DENT ACTIONS

MANAGE, DIRECT, LEAD

GUIDE, ADVISE, TEACH

PROVOKES TRUST

PUNITIVE, SARCASTIC, OR UNKIND ACTIONS

COMPETE, ACT ASSER-TIVELY

HELP, OFFER, GIVE

PROVOKES ACCEPTANCE

PRO. PASSIVE RESISTANCE

AGGRES-SIVE, FIRM ACTIONS

SUPPORT, SYMPA-THIZE, TREAT GENTLY

ATTACK, UNFRIENDLY ACTIONS

PROVOKES HOSTILITY

AFFEC-TIONATE, FRIENDLY ACTIONS

PROVOKES LOVE

SEEKS FRIENDLY FEELINGS FROM OTHERS, EFFU-SIVE ACTIONS

FRANK, FORTH-RIGHT, CRITICAL ACTIONS

PROVOKES TENDERNESS

BITTER, REBELLIOUS ACTIONS, COMPLAIN

PROVOKES PUNISHMENT

REAL-ISTIC & JUSTIFIED REBELLION, UNCON-VENTIONAL

REAL-ISTIC & REALISTIC WARINESS, BE SKEPTICAL

AGREE, PARTI-CIPATE, COOPERATE

OVERCON-VENTIONAL, AGREE AT ALL TIMES, COMPROMISE

PROVOKES HELP

TO ACT HURT OR SUSPICIOUS, DISTRUSTFUL

PROVOKES REJECTION

ACT SHY OR SENSI-TIVELY, BE MODEST

ASK HELP, TRUST

CLING TO, BEG AID, DEPEND ON

PROVOKES ARROGANCE

DO ONE'S DUTY, OBEY

RESPECT, ADMIRE, CONFORM

PROVOKES ADVICE

ANXIOUS, GUILTY, OR SELF-EFFACING ACTIONS, CONDEMN SELF

PROVOKES LEADERSHIP

WEAK AND SPINELESS ACTIONS, SUBMIT

ACT IN AN OVERRESPECT-ING MANNER, DOCILELY CONFORMS

A B C D E F G H I J K L M N O P

FIGURE 1. Classification of Interpersonal Behavior into Sixteen Mechanisms or Reflexes. Each of the sixteen interpersonal variables is illustrated by sample behaviors. The inner circle presents illustrations of adaptive reflexes, e.g., for the variable *A*, *manage*. The center ring indicates the type of behavior that this interpersonal reflex tends to "pull" from the other one. Thus we see that the person who uses the reflex *A* tends to provoke others to *obedience*, etc. These findings involve two-way interpersonal phenomena (what the subject does and what the "Other" does back) and are therefore less reliable than the other interpersonal codes presented in this figure. The next circle illustrates extreme or rigid reflexes, e.g., *dominates*. The perimeter of the circle is divided into eight general categories employed in *interpersonal diagnosis*. Each category has a moderate (adaptive) and an extreme (pathological) intensity, e.g., *Managerial-Autocratic*.

Pre-Commission Leadership Assessment Procedures

The officer cadet leadership assessment system described in Chapter I was developed by military psychologists at the Canadian Forces Personnel Applied Research Unit (PARU) in Toronto, Ontario and consists of the following three components:

1. An evaluation of military skills and knowledge

2. Peer ratings

3. Assessment of performance by instructors on twenty-two critical requirements.

The administration and conduct of leadership assessment procedures is carried out at the cadet training schools by officers who are thoroughly familiar with the material and procedures employed to obtain such ratings. They are assisted in this task by a PARU publication entitled "Canadian Army Instructor's Handbook of Pre-Commission Leadership Assessment Procedures" which contains 38 pages and 12 appendices.

Relationships among Rating Dimensions. Otke (1958) found correlations ranging from .73 to .78 between peer ratings and overall officer assessment determined by instructors independently (p. 54) and concluded that peer ratings can be used as an independent measure of officer cadet performance. Further, Otke (1966) found that cadet's ratings of their classmates on the 22 critical requirements at the end of three weeks of training correlated with:

1. peer ratings completed at the end of training (r = .82)

2. ratings by instructors on 22 critical requirements
   (r = .59)

3. total leadership scores (peer ratings and critical re-
   quirements scores combined) - (r = .73)

Testing Schedule, General Testing Instructions, and Data Preparation.

The Value Survey, Dogmatism Scale, F Scale, and ICL were

administered twice to two groups of 33 officer cadets by two person-

nel selection officers according to the following schedule:

1. The general testing instructions were read aloud.

2. The cadets completed the F Scale followed by the

   Dogmatism Scale.

3. They were given a ten-minute break.

4. Upon return to the classroom they completed the

   Interpersonal Check List followed by the Value

   Survey.

The following general testing instructions served to introduce

the study to the cadets:

> In this study we are interested in finding
> out what officer cadets value most, and how
> they think and feel about a number of important
> social and personal questions. There are four
> parts to this study and it is estimated that
> the time required for completion of the four
> parts by you will be less than two hours. This
> study has nothing to do with your assessment as
> an officer cadet and the results of it will not
> be disclosed to your instructors. We are not
> interested in individual results, but we are

> interested in the inferences that can be
> made from this group of officer cadets in
> relation to all cadets. Are
> there any questions?

In administering the ICL, additional information was given to supplement the instructions to the instrument reproduced in Appendix A-6. For both administrations, each cadet was given the ICL, two IBM score sheets, an HB pencil and an eraser. On the top of one IBM sheet they were asked to place the word "SELF" and a "1" followed by their social insurance numbers. The instructions on top of the adjective check list were read aloud to the cadets as they followed along silently at their seats. They were then asked to individually respond to each of the items from the perspective of "This is how I see myself". After this task was completed, they were asked to place the word "IDEAL" at the top of the second IBM Sheet, and a "2" followed by their social insurance numbers. Again they were asked to respond to each of the adjectives listed on the sheets in front of them; however, this time they were to respond from the perspective of "How I would like to be".

The IBM answer sheets were then scored by putting them into the IBM 1230 optical scanner. This resulted in coded IBM cards being generated which were then combined with a re-ordering and decoding program for scoring the ICL. Following this the results were processed through the IBM 360/67 computer and a vector distance formula (see p. 44) was used to determine S-I congruence.

The F Scale, Dogmatism Scale and Value Survey were scored by

hand, twice, to provide a check of initial scoring accuracy. Once scored, this information, in addition to officer cadet final and component grades and the coded descriptive data gained from the administration the "ROUTP Questionnaire" was punched on the IBM cards for future statistical analysis along with the ICL data.

Statistical Treatments

While mainly a descriptive study, two hypotheses were formulated for the purpose of critically examining officer cadet assessment methods in relation to their values and attitudes. These hypotheses dealt with officer cadets attitudes towards authority and the differences between their self and ideal-self-concepts. These relationships were tested by utilizing a one way analysis of covariance. The main purpose of this analysis was to determine whether there were any differences between the three groups on final criterian scores when these were adjusted for differences in initial scores. Ferguson (1964, pp. 226 - 234) explains this analysis in further detail. Where a significant F was noted a Scheffé test of significance of means was used to determine which groups differed.

Chapter IV describes the results of the analysis just described and begins with a portrait of the above average, average and below average potential military leader (as determined by cadets final grades) amassed from the descriptive data collected and the findings of the Chapter II literature review.

CHAPTER IV

RESULTS

Sample

Sixty-six cadets of the Reserve Officer University Training
Plan (ROUTP) undergoing sixteen weeks of military training at the
Canadian Forces Base in Shilo, Manitoba were asked to co-operate in
this study. The sample consisted of all the Land or Army ROUTP cadets
trained by the Canadian Forces during the 1969 summer period.

The ROUTP was established to select and train university
students for commissioned ranks in the Canadian Armed Forces Reserve
Force. To qualify for a commission, officer cadets must success-
fully complete one year of training which consists of one winter
period with the cadets local Reserve Unit, and one summer period at a
Canadian Forces Base or Training Establishment. On completion of their
winter and summer training periods, officer cadets in the Militia are
granted a commission as Lieutenants in their units.

Of the 66 cadets that began training, three did not complete
the program and another five contributed incomplete test data. Test
scores of the eight subjects just referred to were excluded in the
analysis of data.

The remaining 58 cadets ranged in age from 18 to 22 years,
completed from one to four years of university, represented 22 dif-
ferent Canadian Universities and Colleges and were enrolled in one of
the following programs: Engineering, Science, Commerce, Business

Administration, Law, Physical Education, Premedicine, Education and Arts. In addition seven subjects indicated English was not their mother tongue but all stated that they could read, write and speak English fluently.

Tables 1, 2 and 3 contain descriptive data pertaining to cadets final grades and military experience. In Table 1 it is significant to note that 8 out of the 14 below average cadets failed the summer training program (final grade less than 60) and thus were not considered suitable by their instructors for commissioning in their Militia Units.

TABLE 1

FREQUENCY DISTRIBTUION OF ROUTP
CADETS FINAL GRADES

Letter Grade	Grade Interval	Frequency
A	80 - 100	4
B	70 - 80	23
C	60 - 70	23
F	below 60	8
		58

The 58 cadets referred to in Tables 2 to 14 were grouped as
either above average (top 25%), average (middle 50%), or below average
(bottom 25%) leaders on the basis of the final leadership grades
awarded at the end of the summer training period. Final leadership
grades were comprised of assessments received on critical requirements
(50%), peer ratings (30%) and military skills and knowledge (20%).

TABLE 2

LEADERSHIP RATINGS AND COMPONENT GRADES FOR
ROUTP CADETS GROUPED BY TOTAL GRADES

Group	N	Total Grades	Military Skills	Peer Ratings	Critical Requirements
Above average	14	77.22	16.95	22.06	38.21
Average	30	68.18	16.19	18.03	33.96
Below average	14	58.50	15.66	15.16	27.74
Total	58	68.03	16.25	18.31	33.48

TABLE 3

FREQUENCY DISTRIBUTION OF CADETS
PREVIOUS MILITARY EXPERIENCE

Experience	Group (N = 58)		
	Above average	Average	Below average
None	5	7	4
Cadets only	0	7	2
Militia only	4	8	5
Cadets and militia	4	8	2
Regular force only	1	0	0
Cadets, regular force and militia	0	0	1

The results of the study reported here suggest that above average, average and below average military leaders can be described as follows.

The below average cadet leader is the least authoritarian and congruent of the three types of leaders being described and differs significantly from the average cadet in the authoritarian regard. The non-authoritarian pattern is characterized by affectionate, basically equalitarian and permissive interpersonal relationships indicating

flexibility and readiness to accept and face weaknesses. He also has greater ability to internalize and thus tends to be more creative and imaginative in both cognitive and emotional spheres. This description could easily fit the person who takes a "laissez-faire" approach to leadership. In addition the below average cadet has the most stable instrumental value system which implies that his modes of behavior are the most flexible.

The average cadet leader, on the other hand, is the most authoritarian and dogmatic of the three types of leaders. He is also the most congruent; that is, he sees his self and ideal-self concepts as being similar. By definition the authoritarian is impulsive and stereotyped in his thinking; he is rigid, conservative and intolerant of ambiguity; and he often exaggerates his loyalty and affection toward members of the in-group, and displays hostility toward the out-group. This description could fit the person who takes an auto-cratic approach to leadership most of the time. An approach of this type implies little concern for interpersonal relationships and lack of confidence in others.

The above average cadet leader scored between the average and below average cadet on the measures of authoritarianism and S-I con-gruence and his values and attitudes are more like the latter cadet than the former. He is seen as being most likely to employ a democratic leadership approach in that he sets high standards for production and performance and recognizes because of individual differences and

expectations that he will have to treat everyone differently.

Janowitz (1960) indicates that two types of successful leaders coexist in the military, namely, the "heroic leader" and the "military manager". The writer roughly equates the above average cadet as exemplifying the latter and the average cadet the former, and he believes the literature reviewed in Chapter II supports this view.

Hypothesis 1 Results

Hypothesis 1 predicted that there is a relationship between S-I congruence and officer cadets leadership ability as determined by final and component grades. The results of the statistical analysis dealing with this conjecture are shown in Tables 4, 5 and 6. There was no evidence found to support Hypothesis 1. Further data generated in this analysis are found in Appendices B-1 to B-12 and B-21 to B-23. In addition when cadets leadership grades were plotted against S-I congruences scores the resulting scattergram indicated a more or less random relationship between the variables.

Findings Concerning Authoritarianism

Hypothesis 2 concerning right and general authoritarianism as determined by F and D Scales scores respectively, was partially confirmed. The result of the statistical analysis concerning this premise is reported in Tables 7 and 8.

By referring to Table 7, one can see that a significant relationship was found concerning right authoritarianism based on

total grades (p = .02); appendix B-24 indicates the same relationship

was found when, cadets were grouped according to their critical re-

quirements grades. Scheffé's tests of multiple comparisons between

both sets of three means indicated that average and below average

cadets differed significantly (p ⸜ .05) on this measure with the for-

mer being the most authoritarian and the latter group being the least

authoritarian. Appendices B-13 to B-20 contain additional data con-

cerning analysis of variance of pre and post test F and D scores which

were used in determining the one way analysis of covariance data re-

corded in appendices B-24 and B-25.

TABLE 4

MEAN S-I(16) SCORES OF ROUTP CADETS
GROUPED BY TOTAL GRADES

Means	Group			
	Above average	Average	Below average	F
Pre test	17.07	15.87	17.50	0.43
Post test	16.01	14.55	16.70	0.51
Adjusted post test	15.04	14.89	16.21	0.22

57

TABLE 5

MEAN S-I(8) SCORES OF ROUTP CADETS
GROUPED BY TOTAL GRADES

Means	Group			
	Above average	Average	Below average	F
Pre test	19.92	18.43	20.61	0.39
Post test	19.66	16.05	19.50	0.85
Adjusted post test	19.31	16.56	18.76	0.53

TABLE 6

MEAN S-I(4) SCORES OF ROUTP CADETS
GROUPED BY TOTAL GRADES

Means	Group			
	Above average	Average	Below average	F
Pre test	27.18	23.08	27.36	0.73
Post test	25.22	21.36	25.87	0.46
Adjusted post test	23.94	22.61	24.48	0.09

TABLE 7

MEAN F SCORES OF ROUTP CADETS GROUPED BY
TOTAL GRADES

Means	Group			
	Above average	Average	Below average	F
Pre test	93.43	101.20	98.50	0.61
Post test	97.64	107.03	94.93	2.06
Adjusted post test	101.85	105.01	95.07	4.07*

* $p < .05$

TABLE 8

MEAN D SCORES OF ROUTP CADETS GROUPED BY
TOTAL GRADES

Means	Group			
	Above average	Average	Below average	F
Pre test	139.93	148.20	144.71	0.51
Post test	138.64	152.10	145.21	1.48
Adjusted post test	143.07	149.79	145.74	1.30

Note: Scheffé comparison yielded significance at .05 level between
average and below average cadets grouped by total grades and
22 critical requirements.

Additional Findings

A look at officer cadets' career intentions, value systems, and changes in single values yielded some interesting findings in relation to the two hypotheses just discussed.

Career Intentions. At the completion of the summer training program the cadets were asked to respond to the following question (Appendix A-7 refers):

> From what you know about the Canadian Forces
> do you think you will want to choose it as a
> 20 or 30 year career?...justify your answer
> in a paragraph or two.

Table 4 illustrates the number and percentage of "yes", "no" and "maybe" responses to this question and Appendix C reports "typical" justifications by cadets in each of these categories. The replies of the cadets in this regard are considered to be well worth reading as they deal with the military and leadership, authoritarianism, creativity, defence policies and many other relevant issues.

Value System Similarity. The coefficient of concordance (W) was used to measure value system similarity or homogeneity. W's obtained on terminal and instrumental values for the three groups of cadets are presented in Tables 10 and 11 respectively, along with their value systems or hierarchies. Terminal value W's suggest that above average cadets are the most homogeneous and that average cadets are the least homogeneous in this respect. On the other hand value system concordance for instrumental values shows that below average cadets are the most homogeneous while

TABLE 9

PERCENTAGE OF CAREER INTENTION RESPONSES OF
ROUTP CADETS GROUPED BY TOTAL GRADES

| | | Group | | | | | |
| | | Above average | | Average | | Below average | |
Possible Responses	N	N	%	N	%	N	%
Yes	8	1	7.10	3	10.00	4	28.60
No	28	10	71.45	13	43.30	5	35.70
Maybe	22	3	21.45	14	47.70	5	35.70
Total	58	14	100	30	100	14	100

average cadets are the least in agreement.

Value System Change. Table 12 is useful in answering two questions - What group of cadets value systems change most and what group of cadets value systems are most stable? With regards to terminal values, average cadets value systems are the most stable while below average cadets value hierarchies change the most. These findings are reversed for instrumental values; average cadets have the least stable instrumental value system while the below average cadets show the most stability.

Change in Single Values. A t test for correlated measures was used in Table 13 to determine the extent to which test-retest change of a given value is a function of its initial ranking, or a function of the training received.

With regards to terminal values three significant relationships were found:

1. Social recognition (respect, admiration) for above average cadets changed significantly (p < .05). Its position in the groups value hierarchy moved from 13 to 16 during the summer training program.

2. A world at peace (free of war and conflict) changed significantly (p < .01) for average cadets, increasing in importance to the group as evidenced by moving from a composite rank order of 9 to 4.

3. Mature love (sexual and spiritual intimacy) was significant

at the .01 level for average cadets.

This value decreased in its relative importance to the group moving from a position of 2 to 6 in the value system.

Instrumental values, on the other hand, showed two significant changes (p < .01) and these changes were both experienced by the average group of cadets (see table 14).

1. Broad-minded (open-minded) increased in importance as is evidenced by its moving from number 5 position in the value hierarchy to position 1.

2. The instrumental value, independent (self-reliant, self-sufficient), also increased in degree of importance; it moved from a position of 8 to one of 4.

TABLE 10

COMPOSITE RANK-ORDER AND COEFFICIENT OF CONCORDANCE (W) OF
ROUTP CADETS' TERMINAL VALUES GROUPED BY TOTAL GRADES

Terminal Values	Pre Test			Post Test		
	Above average	Average	Below average	Above average	Average	Below average
Freedom	1	1	1	2	1	5
Wisdom	2	4	3	1	3	2
Self-respect	3	7	2	8	7	1
Family Security	4	11	10	9	10	11
True friendship	5	3	4	4	5	3
Inner harmony	6	8	8	7	11	8
Happiness	7	6	7	3	2	6
An exciting life	8	12	12	10	12	12
Mature love	9	2	5	6	6	4
A sense of accomplishment	10	5	9	5	9	7
Equality	11	10	6	11	8	10
A world at peace	12	9	11	12	4	9
Social recognition	13	17	14	16	17	18
A world of beauty	14	18	16	13	15	13
A comfortable life	15	13	17	14	13	14
National security	16	14	13	15	14	15
Pleasure	17	16	18	17	16	16
Salvation	18	15	15	18	18	17
W	0.303*	0.278*	0.290*	0.406*	0.282*	0.301*

* $p < .001$

TABLE 11

COMPOSITE RANK-ORDER AND COEFFICIENT OF CONCORDANCE (W) OF
ROUTP CADETS INSTRUMENTAL VALUES GROUPED BY TOTAL GRADES

Instrumental Values	Pre test			Post test		
	Above average	Average	Below average	Above average	Average	Below average
Honest	1	2	2	3	3	3
Responsible	2	1	1	1	2	2
Self-controlled	3	4	8	6	5	10
Capable	4	3	7	4	6	7
Independent	5	8	3	5	4	5
Broadminded	6	5	6	2	1	6
Intellectual	7	7	5	7	9	1
Logical	8	6	4	9	8	4
Courageous	9	11	9	10	7	9
Imaginative	10	14	11	8	14	8
Ambitious	11	9	10	11	11	11
Cheerful	12	12	12	12	10	12
Helpful	13	15	13	13	13	13
Forgiving	14	13	14	15	15	16
Loving	15	10	15	14	12	14
Obedient	16	16	17	17	16	15
Polite	17	17	16	16	17	17
Clean	18	18	18	18	18	18
W	0.320*	0.183*	0.326*	0.356*	0.245*	0.388*

*p < .001

TABLE 12

SPEARMAN'S RHO INDICATING VALUE SYSTEM
CHANGE FOR ROUTP CADETS BETWEEN PRE
AND POST TEST PERIODS

Terminal Values

Above average	Average	Below average
0.61	0.62	0.54

Instrumental Values

Above average	Average	Below average
0.53	0.51	0.62

TABLE 13

MEAN CHANGES IN RANK-ORDER OF 18 TERMINAL VALUES OF ROUTP
CADETS AFTER 12 WEEKS OF TRAINING GROUPED BY TOTAL GRADES

Terminal Values	Group		
	Above average	Average	Below average
	N		
	14	30	14
A comfortable life	0.57	0.90	1.71
An exciting life	-0.79	-0.27	1.14
A sense of accomplish-ment	1.50	-1.27	-0.79
A world at peace	0.29	1.43*	1.29
A world of beauty	0.93	1.46	1.43
Equality	-0.07	1.16	-1.79
Family security	-1.39	0.83	-2.14
Freedom	0.14	0.30	-1.36
Happiness	2.79	0.86	0.36
Inner Harmony	-0.43	-1.53	-0.57
Mature love	0.71	-1.70**	0.83
National security	1.07	0.17	0.71
Pleasure	0.36	0.57	0.71
Salvation	-0.71	-1.17	-1.50
Self-respect	-2.21	-0.07	1.50
Social recognition	3.29*	-0.83	-2.00
True friendship	1.29	-0.90	0.14
Wisdom	1.21	0.43	2.00

* $p < .05$

** $p < .01$,

t test for correlated measures

TABLE 14

MEAN CHANGES IN RANK-ORDER OF 18 INSTRUMENTAL VALUES OF ROUTP
CADETS AFTER 12 WEEKS OF TRAINING GROUPED BY TOTAL GRADES

Instrumental Values	Group		
	Above average	Average	Below average
		N	
	14	30	14
Ambitious	-1.11	-0.87	0.57
Broadminded	1.93	2.70**	1.43
Capable	-0.29	-1.33	0.79
Cheerful	-0.14	1.23	-0.57
Clean	-1.50	-0.53	-2.36
Courageous	-0.36	0.30	-0.07
Forgiving	-0.96	-0.60	-0.71
Helpful	0.07	0.30	-0.21
Honest	-2.72	0.03	-1.36
Imaginative	0.79	-0.33	3.64
Independent	0.36	3.23**	-0.29
Intellectual	0.22	-0.63	1.96
Logical	0.07	-0.60	-0.07
Loving	1.79	-0.50	0.22
Obedient	-0.64	-0.40	-0.21
Polite	0.14	-0.20	-0.64
Responsible	1.86	-0.17	-0.43
Self-controlled	-0.64	-0.50	-0.71

* $p < .05$

** $p < .01$

t test for correlated measures

CHAPTER V

DISCUSSION, IMPLICATIONS AND SUMMARY

Discussion

The main purpose of this study was to gather descriptive data
of officer cadets values and attitudes and to explore any relationship
that existed between this information and leadership assessment pro-
cedures. The instruments used to test the two hypotheses formulated
faced a difficult task as the cadets had already been selected as
suitable officer candidates by recruiting and personnel selection of-
ficers, and the unsuitable ones had already been screened out in the
selection process. The size of the Reserve Officer University
Training Plan (ROUTP) population was small and no control group was
available. It must also be mentioned that man took his first step on
the moon during the time between the test-retest period. Just what
effect this major historical event with its close military connections
had on the internal validity of this study is unknown as it was not
controlled in this study's design.

The validity and reliability question of the instruments and
theory is of central importance. In the past the Trait Theory of
leadership and cadet assessment systems evolving from it did not prove
adequate in differentiating the successful from the unsuccessful
military leader. Today the Leader-Follower-Situation concept of
leadership in conjunction with peer rating and critical requirements

assessment procedures is used to scientifically determine what is a good

leader. The critical incident technique, described by Flanagan (1952)

and mentioned in Chapter I was the procedure used by Otke (1958, 1966)

for gathering important facts about leadership behavior in the Canadian

Forces. Chapter III (p. 46) findings in this regard suggest the tech-

nique measures what it purports to measure, consistently; but who can

say it will continue to do so as the technology of war changes. In

addition no research was found in the form of follow-up studies re-

lating cadets assessed leadership grades to their actual on the job

performance evaluations as leaders.

Self-Ideal-Self (S-I) Congruence. Hypothesis 1 stated that:

> Cadets classified as above average, average
> and below average leaders differ significantly
> on S-I congruence as determined by S-I (16),
> S-I (8) and S-I (4) scores when pre test res-
> ponses are controlled.

The relationship hypothesized was not found. One explanation of

this finding is that the ROUTP cadet selection procedures factored out

the differences one would normally expect. But even this explanation

is suspect when considered in relation to the findings of Adorno et al

(1950, p. 431) which suggest that high F scorers will be more congruent

than low F scorers with the latter being basically more secure, insight-

ful, and willing to admit an appropriate amount of dissatisfaction with

one's self. The fact that average (high F scorers) cadets differ sig-

nificantly from below average (low F scorers) cadets, would suggest that

the S-I congruence scores of these two groups would also differ

significantly. Significance was not found but the mean discrepancies

were as expected with average cadets scoring the lowest in this regard.

Dogmatism and Authoritarianism. Hypothesis 2 was stated in the

following manner:

> The three groups of cadets referred to in
> Hypothesis 1 differ significantly on authori-
> tarianism as determined by F and D Scale
> scores when pre test results are controlled.

Hypothesis 2 was partially confirmed and the results raise two

important questions. Why did cadets differ on the measure of right

authoritarianism and not on the dogmatism or general authoritarianism

measure? What does this result tell us about officer cadet leadership

assessment procedures?

Partial answers to these questions are found in the works of

Janowitz (1960, 1964, 1965) and Rokeach (1960). Janowitz (1965) in

studying the basic changes in the U. S. military over the past fifty

years claims the impact of technology has forced a shift in the

practices of the military away from authoritarian domination (involving

threats and negative sanctions) and towards greater reliance on mani-

pulation (based on achievement, giving reasons for orders, and control

by means of group pressures), persuasion, and group consensus.

Janowitz's proposition is probably true, but the findings of

this study suggest it is not so for Phase I ROUTP training. A partial

indication of this fact is found in some of the cadets typical "no"

responses tabulated in Appendix C to the question concerning their

career intentions.

> I feel the army is illogical and disorganized,
> the concept of leadership is still strict dis-
> cipline rather than the follower doing something
> he is told because he knows why he is doing it
> and therefore sees a reason for his actions...

> The people in the regular forces I know are
> pretty narrow-minded conservatives with one
> frame of thought...

> The armed forces, in the present makeup, is an
> institution which stifles an individual's
> creativity. The social stratas found in the
> forces destroy much of the effectiveness between
> groups (i.e. NCO's and officers). Mainly life
> in the forces would fail to answer one basic
> question - "WHY?"

The proposition of Janowitz's coupled with the narrative res-

ponses of cadets link together an interesting array of findings.

Average and below average cadets defined by total grades and 22

critical requirements scores differ significantly on F Scale mean

scores. In both instances average cadets are the most authoritarian

and below average cadets are the least authoritarian while the top

leaders or above average cadets lie between the former groups on F

scores achieved. One will recall that the term critical requirement

refers to the essential elements of leadership that discriminate be-

tween successful and unsuccessful leaders and that this portion of the

assessment system accounts for 50% of a cadet's final grade. This

technique is based on the assumption that a large number of actual

recorded observations of performance (critical incidents) of individual

cadets by instructors is essential in order to make accurate judgements

concerning leadership ability. If an objective procedure such as this one, is not followed evaluations of cadets will be based on incomplete information and instructors personal feelings and opinions only. In this study cadets classified according to their critical requirements scores differentiated the average or high F Scale scoring cadet from the below average or low F Scale scoring cadet. The implication of this finding is that the critical requirements technique of assessment discriminates against the less authoritarian cadet. This possibility appears highly unlikely and a more logical reason would be that instructors did not collect sufficient numbers of critical incidents and based much of this mark on personal feelings and opinions. Whatever the case, the finding is considered important and worthy of further research.

Table 9 (p. 60) concerning ROUTP cadets career intentions adds more food for thought concerning leadership assessment procedures. Seventy-one percent or 10 out of the 14 top cadets indicated they did not want to choose the military as a 20 or 30 year career, as compared with 43% of the average cadets and 36% of the below average cadets. The trend suggested by the data is not what one would expect and raises such questions as: Why do assessed above average military leaders not see themselves generally making the Canadian Forces a 20 year career? Why is the failing cadet most positive in making the military a career and is he worth retaining if counselled?

A partial answer to why the below average cadets indicated the

highest percentage of "yes" responses to the career intention question is found in Getzels and Guba (1955) role conflict study. He found that the more authoritarian officer was under greater role conflict and had great difficulty in shifting roles from soldier to student and from student to teacher. This finding suggests that the low F Scale scorer (below average cadet) is more flexible and adds credibility to the notion put forth by French and Ernest (1955) that "equalitarian" individuals will not necessarily reject the military.

Rokeach (1960) suggested that the D Scale measured general authoritarianism and the F Scale measured right authoritarianism with the latter scale correlating significantly with attitudes towards liberalism-conservatism (high F scorers being the more conservative) while D Scale correlations were not significant. This finding coupled with Janowitz's (1960, pp. 236 - 241) statement that politically U. S. officers lean markedly to the right with 68 percent willing to characterize themselves as conservatives while only five percent identified themselves as liberal, is further suggestive of why a significant relationship on the F Scale was found while not so on the D Scale.

Kemp (1960) found that "closed subjects (high D Scale scorers) more frequently entered military and commercial careers of an administrative nature (p. 346)." While analysis of dogmatism scores for ROUTP cadets indicated no significant relationships, the fact that average cadets mean D scores were higher than the other two groups of cadets adds useful information and is considered relevant to this

discussion.

The group of cadets rated lowest on leadership by their peers had the lowest F scores while again the average cadets achieved the high F scores (Appendices B-15 and B-24 refers). While the relationship was not significant it is not the trend you would expect to find after looking at the Hollander (1954) study. He found that officer cadets scoring lowest on authoritarianism were highest on peer rating leadership nominations. In this same study Hollander suggests that evidence exists that Air Force selection boards most often select less authoritarian leaders for promotion. Titus (1968) found minimal relationship only between F Scale scores and peer perception of authoritarian behavior.

Terminal and Instrumental Values. Rokeach (1968, p. 157) suggests that values are more important than attitudes and he sees values determining attitudes as well as behavior. So far this discussion has only been concerned with those attitudes an individual has of himself, of his ideal-self, and attitudes towards authority. What additional insights can the information gathered concerning officer cadets individual values and value systems give us regarding leadership training and cadets personalities?

Tables 10 and 11 (see pp. 63, 64) indicated that above and below average officer cadets value systems have more in common or are more alike than when either of these groups are compared with average cadets. This finding leads one to ask why above and below average cadets who

have similar personalities should be split in this manner when it comes

to the awarding of final leadership grades.

A look at value system change and stability findings reported

by Rokeach in his yet unpublished paper provides partial answers.

> More stable instrumental value systems are
> found among honor students as compared with
> non-honor students...among those who identify
> themselves as liberals rather than conserva-
> tives...(p. 8).

Table 12 (see p. 65) indicates that below average cadets have

the most stable instrumental value system. This finding coupled with

the implied liberal orientations supports the studies of Rokeach (1960)

and Janowitz (1960) reported earlier in this discussion.

Still further knowledge can be gained by looking at changes in

single values. Tables 13 and 14 (see pp. 66, 67) showed no significant

changes in single values for below average cadets, only one significant

change for above average cadets (The value of social recognition de-

creased in importance) and four changes for average cadets. What kind

of impact did the sixteen weeks military leadership training program

have on this latter group? To begin with three values increased signi-

ficantly in importance. Broadminded and independent, both instrumental

values, showed changes significant at the (p < .01) level with test-

retest changes in rank orders showing broadminded going from number 5

position in the value hierarchy to position 1, and independent moving

from position 8 to position 4; the terminal value, a world at peace,

was significant at the .05 level and moved from a composite rank of 9

to 4.

How are these changes related to earlier findings and previous research? Since authoritarianism was the central attitudinal theme of this study, the increase in importance of the instrumental value of broadminded or open-minded in average cadets is interesting and suggestive. Could it be that this group has actually become aware, because of interaction with their peers and a military environment, that they possess many of the characteristics of closed-minded and authoritarian subjects described in the studies reviewed in Chapter II? Harvey (1966) indicates that high dogmatism and F scorers manifest "high <u>positive</u> dependance on representatives of institutional authority (p. 43)." This finding can be interpreted as meaning that subjects who fall in this category or "system" depend on others to satisfy their needs. This study coupled with average cadets placing increased importance on becoming self-reliant and self-sufficient (<u>independent</u>) strongly suggest a move towards open-mindedness for the group. The social desirability question could also explain the results just mentioned.

Why the terminal value of <u>mature love</u> meaning sexual and spiritual intimacy decreased in importance for average cadets is difficult to explain; and the author cannot think of any explanation to elucidate this matter.

Implications for Further Research

The matter of the values and attitudes of leaders and their

followers has received little attention in the Canadian Forces. The
study reported here raised a number of unanswered questions in the mind
of the writer which he considers worthy of further research.

1. Can knowledge of a cadets values, value systems and at-
    titudes increase personnel selection and recruiting
    officers success in selecting suitable military leaders,
    and predict more accurately those candidates who are
    training risks?

2. Can the F Scale be used as a screening device and how
    "extreme" is the average or authoritarian cadet and the
    below average or non-authoritarian cadet?

3. What is the nature of the relationship between the atti-
    tude of authoritarianism, peer rating influences and each
    of the 22 critical requirements of leadership assessment
    for successful and unsuccessful leaders?

4. Has there been a shift in the basis of authority and dis-
    cipline in the Canadian Forces, away from authoritarian
    domination and towards greater reliance on manipulation,
    persuasion and group consensus?

5. What are the effects of social barriers between leaders
    and followers with regards to discipline and group produc-
    tivity?

6. Why did 71% of the above average cadet leaders answer "no"
    to the question concerning their career intentions when it

is this cadet the military would most prefer to retain?

The common denominator of the questions just posed centers on the relationship between authority and leadership. The military officer, the organizational executive, the judge, and the foreman have authority by virtue of the position they hold. They may or may not also exert leadership. Authority involves the legitimated rights of a position that requires others to obey; leadership, on the other hand, is an interpersonal relationship in which others comply because they want to not because they have to. This distinction is considered an essential beginning in researching any of the questions just posed.

Summary

The purpose of this study was to examine the Reserve Officers University Training Plan leadership program in relation to officer cadets values and attitudes.

Descriptive data concerning 66 ROUTP officer cadets' leadership grades, military experience, career intentions, values, attitudes toward authority, and attitudes towards self and ideal-self were gathered to assist in answering the following questions.

1. What are some of the values and attitudes held by officer cadets?

2. What changes occur in cadets values during Phase I training?

3. Do cadets differ significantly from one another on the

values and attitudes they hold?

The hypotheses posed concerning S-I congruence and authoritarianism were tested by utilizing a one sample pre-test - post-test design and statistical procedures involving a one way analysis of co-variance. The one value and three attitude instruments used to collect the required data faced a difficult task in light of the fact that recruiting and personnel selection officers had already indicated that these cadets possessed necessary officer potential to be successful in training.

Even so, a significant relationship was found on the measure of right authoritarianism (California F Scale) indicating that average cadets (high F scorers) differed from below average cadets (low F Scale scorers). This finding suggests that officer cadets total and critical requirements grades discriminate against the least authoritarian subject whose interpersonal relationships are basically equalitarian and whose modes of behavior are most flexible. Further the failing or below average cadet is more like the most successful or above average cadet in his basic personality structure as determined by the value and attitude measures used in this study. The writer speculates that the below average cadet prefers a "laissez-faire" approach to leadership and because this approach has limited applicability in the military he failed the course.

In conclusion the findings of this study indicate the need for further research to clarify the nature of the relationship between the

22 critical requirements of leadership assessment and the attitude of

authoritarianism with its underlying values.

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APPENDICES

APPENDIX A

(Instrumentation)

LEADER DESCRIPTIONS

What Kind of Leader Will He Become?

7.   The Very Best Kind of Leader

I would stake my life on him to know his job and do it right at
all times.
He will run the best platoon in the unit.
Men would be more than willing to work for him and follow him.

6.   An Extremely High Kind of Leader

He will do a good deal more than is required of him, for the good
of the group.
He will pull a great deal more than his own weight in a tough
situation.

5.   A Very Good Leader

He will do more than is required of him.
He has what it takes to do the job right.
He would inspire confidence and have support.

4.   A Good Leader

He would do what is required of him in the group.
He might make mistakes but he would usually come through.
He would do an average job of running his platoon.

3.   A Fair Leader

He doesn't quite have what it takes to do the job right, unless
he is backed by someone else.
He would run a less-than-average platoon.
He may lose sight of the group task.

2.   A Poor Leader

He has very little of what it takes to be a leader.
Somebody would always have to be checking on him or covering for
him.
He is likely to fail in a tight situation.

1.   <u>The Worst Kind of Leader</u>

He would probably never be considered for a leader's job.
He would probably fail in a pinch and endanger the lives of his
men.
His outfit would be better off without him.

<u>NOTE</u>: Adapted from Annex F to "Canadian Army Instructors Handbook
of Pre-Commission Leadership Assessment Procedures."

APPENDIX A-2

ASSESSMENT ON 22 CRITICAL REQUIREMENTS
PHASE ONE

1. Performing successfully under extended periods of
    physical stress.   /45

2. Performing successfully under extended periods of
    emotional stress.   /45

3. Admitting mistakes.   /40

4. Accepting constructive criticism.   /40

5. Learning from experience.   /40

6. Assuming responsibility.   /40

7. Taking action on his own.   /35

8. Telling the truth.   /35

9. Acting honestly.   /35

10. Making an effort to co-operate with others and working
    as a member of a team.   /35

11. Knowing the job.   /35

12. Correctly applying his knowledge.   /35

13. Complying with rules and orders even though he disagrees.   /35

14. Supporting superiors and associates even though he
    disagrees.   /30

15. Ensuring the understanding of assigned tasks.   /30

16. Ensuring the superivison and completion of assigned
    tasks.   /25

17. Maintaining and increasing team performance by demanding
    consistently high standards regardless of conditions.   /25

18. Maintains a high standard of appearance and hygiene.   /25

19. Maintaining good personal habits and manners.   /25

20. Expressing himself clearly and concisely orally.   /25

21. Expressing himself clearly and concisely in writing.   /20

22. Delegating tasks to others.   /20

    TOTAL CRITICAL REQUIREMENT SCORE   /720

NOTE: Adapted from Annex A to "Canadian Army Instructors Handbook
        of Pre-Commission Leadership Assessment Procedures."

APPENDIX A-3

DOGMATISM SCALE

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disgreeing just as strongly with others, and perhaps uncertain about others according to how much you agree or disagree with it.

+1: I agree a little   -1: I disagree a little
+2: I agree on the whole   -2: I disagree on the whole
+3: I agree very much   -3: I disagree very much

-3-2-1+1+2+3   1.   The United States and Russia have just about nothing in common.

-3-2-1+1+2+3   2.   The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.

-3-2-1+1+2+3   3.   Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

-3-2-1+1+2+3   4.   It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.

-3-2-1+1+2+3   5.   Man on his own is a helpless and miserable creature.

-3-2-1+1+2+3   6.   Fundamentally, the world we live in is a pretty lonesome place.

-3-2-1+1+2+3   7.   Most people just don't give a "damn" for others.

-3-2-1+1+2+3   8.   I'd like it if I could find someone who would tell me how to solve my personal problems.

-3-2-1+1+2+3   9.   It is only natural for a person to be rather fearful of the future.

-3-2-1+1+2+3   10.   There is so much to be done and so little time to do it in.

-3-2-1+1+2+3   11.   Once I get wound up in a heated discussion I just can't stop.

-3-2-1+1+2+3   12.   In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

-3-2-1+1+2+3   13.   In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.

-3-2-1+1+2+3   14.   It is better to be a dead hero than to be a live coward.

-3-2-1+1+2+3   15.   While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.

-3-2-1+1+2+3   16.   The main thing in life is for a person to want to do something important.

-3-2-1+1+2+3   17.   If given the chance I would do something of great benefit to the world.

-3-2-1+1+2+3   18.   In the history of mankind there have probably been just a handful of really great thinkers.

-3-2-1+1+2+3   19.   There are a number of people I have come to hate because of the things they stand for.

-3-2-1+1+2+3   20.   A man who does not believe in some great cause has not really lived.

-3-2-1+1+2+3   21.   It is only when a person devotes himself to an ideal or cause that life becomes meaningful.

-3-2-1+1+2+3   22.   Of all the different philosophies which exist in this world there is probably only one which is correct.

-3-2-1+1+2+3   23.   A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.

-3-2-1+1+2+3   24.   To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.

-3-2-1+1+2+3   25.   When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.

-3-2-1+1+2+3   26.   In times like these, a person must be pretty selfish if he considers primarily his own happiness.

-3-2-1+1+2+3   27.   The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.

-3-2-1+1+2+3   28.   In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.

-3-2-1+1+2+3   29.   A group which tolerates too much differences of opinion among its own members cannot exist for long.

-3-2-1+1+2+3   30.   There are two kinds of people in this world: those who are for the truth and those who are against the truth.

-3-2-1+1+2+3   31.   My blood boils whenever a person stubbornly refuses to admit he's wrong.

-3-2-1+1+2+3   32.   A person who thinks primarily of his own happiness is beneath contempt.

-3-2-1+1+2+3   33.   Most of the ideas which get printed nowadays aren't worth the paper they are printed on.

-3-2-1+1+2+3   34.   In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.

-3-2-1+1+2+3   35.   It is often desirable to reserve judgement about what's going on until one has had a chance to hear the opinions of those one respects.

-3-2-1+1+2+3   36.   In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

-3-2-1+1+2+3   37.   The present is all too often full of unhappiness.
                       It is only the future that counts.

-3-2-1+1+2+3   38.   If a man is to accomplish his mission in life, it
                       is sometimes necessary to gamble "all or nothing
                       at all".

-3-2-1+1+2+3   39.   Unfortunately, a good many people with whom I have
                       discussed important social and moral problems
                       don't understand what's going on.

-3-2-1+1+2+3   40.   Most people just don't know what's good for them.

APPENDIX A-4

VALUE SURVEY INSTRUMENT

Below is a list of 18 values arranged in alphabetical order. We are interested in finding out the relative importance of these values for you.

Study the list carefully. Then place a 1 next to the value which is most important to you, place a 2 next to the value which is second most important to you, etc. The value which is least important, relative to the others, should be ranked 18.

When you have completed ranking all of the values, go back and check over your list. Please take all the time you need to think about this, so that the end result is a true representation of your values.

_____ A COMFORTABLE LIFE (a prosperous life)

_____ AN EXCITING LIFE (a stimulating, active life)

_____ A SENSE OF ACCOMPLISHMENT (lasting contribution)

_____ A WORLD AT PEACE (free of war and conflict)

_____ A WORLD OF BEAUTY (beauty of nature and the arts)

_____ EQUALITY (brotherhood, equal opportunity for all)

_____ FAMILY SECURITY (taking care of loved ones)

_____ FREEDOM (independence, free choice)

_____ HAPPINESS (contentedness)

_____ INNER HARMONY (freedom from inner conflict)

_____ MATURE LOVE (sexual and spiritual intimacy)

_____ NATIONAL SECURITY (protection from attack)

_____ PLEASURE (an enjoyable, leisurely life)

_____ SALVATION (saved, eternal life)

_____ SELF-RESPECT (self-esteem)

_____   SOCIAL RECOGNITION (respect, admiration)

_____   TRUE FRIENDSHIP (close companionship)

_____   WISDOM (a mature understanding of life)

Below is a list of another 18 values. Rank these in order of importance in the same way you ranked the first list on the preceding pages.

_____   AMBITIOUS (hard-working, aspiring)

_____   BROADMINDED (open-minded)

_____   CAPABLE (competent, effective)

_____   CHEERFUL (lighhearted, joyful)

_____   CLEAN (neat, tidy)

_____   COURAGEOUS (standing up for your beliefs)

_____   FORGIVING (willing to pardon others)

_____   HELPFUL (working for the welfare of others)

_____   HONEST (sincere, truthful)

_____   IMAGINATIVE (daring, creative)

_____   INDEPENDENT (self-reliant, self-sufficient)

_____   INTELLECTUAL (intelligent, reflective)

_____   LOGICAL (consistent, rational)

_____   LOVING (affectionate, tender)

_____   OBEDIENT (dutiful, respectful)

_____   POLITE (courteous, well-mannered)

_____   RESPONSIBLE (dependable, reliable)

_____   SELF-CONTROLLED (restrained, self-disciplined)

APPENDIX A-5

CALIFORNIA F-SCALE

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others according to how much you agree or disagree with it.

+1: I agree a little   -1: I disagree a little
+2: I agree on the whole   -2: I disagree on the whole
+3: I agree very much   -3: I disagree very much

-3-2-1+1+2+3   1.   Obedience and respect for authority are the most important virtues children should learn.

-3-2-1+1+2+3   2.   A person who has bad manners, habits, and breeding can hardly expect to get along with decent people.

-3-2-1+1+2+3   3.   If people would talk less and work more, everybody would be better off.

-3-2-1+1+2+3   4.   The businessman and the manufacturer are much more important to society than the artist and the professor.

-3-2-1+1+2+3   5.   Science has its place, but there are many important things that can never possibly be understood by the human mind.

-3-2-1+1+2+3   6.   Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.

-3-2-1+1+2+3   7.   What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.

-3-2-1+1+2+3   8.   No sane, normal, decent person could ever think of hurting a close friend or relative.

-3-2-1+1+2+3   9.   Nobody ever learned anything really important except through suffering.

-3-2-1+1+2+3   10.   What the youth needs most is strict discipline,
                       rugged determination, and the will to work and fight
                       for family and country.

-3-2-1+1+2+3   11.   An insult to our honor should always be punished.

-3-2-1+1+2+3   12.   Sex crimes, such as rape and attacks on children,
                       deserve more than mere imprisonment; such criminals
                       ought to be publicly whipped, or worse.

-3-2-1+1+2+3   13.   There is hardly anything lower than a person who does
                       not feel a great love, gratitude, and respect for his
                       parents.

-3-2-1+1+2+3   14.   Most of our social problems would be solved if we
                       could somehow get rid of the immoral, crooked, and
                       feeble-minded people.

-3-2-1+1+2+3   15.   Homosexuals are hardly better than criminals and
                       ought to be severely punished.

-3-2-1+1+2+3   16.   When a person has a problem or worry, it is best for
                       him not to think about it, but to keep busy with more
                       cheerful things.

-3-2-1+1+2+3   17.   Every person should have complete faith in some
                       supernatural power whose decisions he obeys without
                       question.

-3-2-1+1+2+3   18.   Some people are born with an urge to jump from high
                       places.

-3-2-1+1+2+3   19.   People can be divided into two distinct classes: the
                       weak and the strong.

-3-2-1+1+2+3   20.   Some day it will probably be shown that astrology can
                       explain a lot of things.

-3-2-1+1+2+3   21.   Wars and social troubles may some day be ended by an
                       earthquake or flood that will destroy the whole world.

-3-2-1+1+2+3   22.   No weakness or difficulty can hold us back if we have
                       enough will power.

-3-2-1+1+2+3   23.   Most people don't realize how much our lives are con-
                       trolled by plots hatched in secret places.

-3-2-1+1+2+3   24. Human nature being what it is, there will always be
                     war and conflict.

-3-2-1+1+2+3   25. Familiarity breeds contempt.

-3-2-1+1+2+3   26. Nowadays when so many different kinds of people move
                     around and mix together so much, a person has to
                     protect himself especially carefully against catching
                     an infection or disease from them.

-3-2-1+1+2+3   27. Nowadays more and more people are prying into matters
                     that should remain personal and private.

-3-2-1+1+2+3   28. The wild sex life of the old Greeks and Romans was
                     tame compared to some of the goings-on in this
                     country, even in places where people might least
                     expect it.

APPENDIX A-6

THE INTERPERSONAL CHECK LIST

INSTRUCTIONS: Please indicate whether you view each of the attributes listed below as being either <u>mostly</u> true or <u>mostly</u> false as they apply to you. It is very important that you check either "true" or "false" for each item, even if you are somewhat uncertain of your choice. Also, try to work quickly; most people can complete this information in less than 15 minutes. Use Col. 1 for true; Col. 2 for false on the IBM answer sheet.

1. Able to give orders
2. Appreciative
3. Apologetic
4. Able to take care of self
5. Accepts advice readily

6. Able to doubt others
7. Affectionate and understanding
8. Acts important
9. Able to criticize self
10. Admires and imitates others

11. Agrees with everyone
12. Always ashamed of self
13. Very anxious to be approved of
14. Always giving advice
15. Bitter

16. Bighearted and unselfish
17. Boastful
18. Businesslike
19. Bossy
20. Can be frank and honest

21. Clinging vine
22. Can be strict if necessary
23. Considerate
24. Cold and unfeeling
25. Can complain if necessary

26. Cooperative
27. Complaining
28. Can be indifferent to others
29. Critical of others
30. Can be obedient

31. Cruel and unkind
32. Dependent
33. Dictatorial
34. Distrusts everybody
35. Dominating

36. Easily embarrassed
37. Eager to get along with others
38. Easily fooled
39. Egotistical & conceited
40. Easily led

41. Encouraging others
42. Enjoys taking care of others
43. Expects everyone to admire him
44. Faithful follower
45. Frequently disappointed

46. Firm but just
47. Fond of everyone
48. Forceful
49. Friendly
50. Forgives anything

51. Frequently angry
52. Friendly all the time
53. Generous to a fault
54. Gives freely of self
55. Good leader

56. Grateful
57. Hard-boiled when necessary
58. Helpful
59. Hard-hearted
60. Hard to convince

61. Hot-tempered
62. Hard to impress
63. Impatient with others' mistakes
64. Independent
65. Irritable

66. Jealous
67. Kind and reassuring
68. Likes responsibility
69. Lacks self-confidence
70. Likes to compete with others

71. Lets others make decisions
72. Likes everybody
73. Likes to be taken care of
74. Loves everyone
75. Makes a good impression

76. Manages others
77. Meek
78. Modest
79. Hardly ever talks back
80. Often admired

81. Obeys too willingly
82. Often gloomy
83. Outspoken
84. Overprotective of others
85. Often unfriendly

86. Oversympathetic
87. Often helped by others
88. Passive and unaggressive
89. Proud and self-satisfied
90. Always pleasant and agreeable

91. Resentful
92. Respected by others
93. Rebels against everything
94. Resents being bossed
95. Self-reliant and assertive

96. Sarcastic
97. Self-punishing
98. Self-confident
99. Self-seeing
100. Shrewd and caluclating

101. Self-respecting
102. Shy
103. Sincere and devoted to friends
104. Selfish
105. Skeptical

106. Sociable and neighborly
107. Slow to forgive a wrong
108. Somewhat snobbish
109. Spineless
110. Stern but fair

111. Spoils people with kindness
112. Straightforward and direct
113. Stubborn
114. Suspicious
115. Too easily influenced by friends

116. Thinks only of self
117. Tender and soft-hearted
118. Timid
119. Too lenient with others
120. Tender and easily hurt

121. Too willing to give to others
122. Tries to be too successful
123. Trusting and eager to please
124. Tries to comfort everyone
125. Usually gives in

126. Very respectful to authority
127. Wants everyone's love
128. Well thought of
129. Wants to be led
130. Will confide in anyone

131. Warm
132. Wants everyone to like him
133. Will believe anyone
134. Well-behaved

APPENDIX A-7

ROUTP QUESTIONNAIRE

1.   Languages (Please check appropriate spaces)

	Spoken	Written	Read
a. English	_____	_____	_____
b. French	_____	_____	_____
c. Other	_____	_____	_____

   d.   What language is spoken in your home?_____

2.   Education

   a.   What university do you attend?_____

   b.   In what faculty are you enrolled?_____

   c.   And in what course of study do you plan to specialize? _____

   _____

   d.   Date of University entrance_____

   e.   Anticipated date of graduation_____

3.   What previous military experience have you had?_____

   _____

   _____

   _____

   _____

4.   From what you now know about the Canadian Forces do you think you will want to choose it as a 20 or 30 year career? Please answer this question by circling one of the following answers, and then justify your answer in a paragraph or two.

   a. Yes   c. Maybe

   b. No

APPENDIX B

(Statistical Tables)

Appendix B-1 to B-12

 One Way Analysis of Variance of Pre and Post Test S-I (16), S-I (8) and S-I (4) Scores along with Analysis of Covariance results for Officer Cadets Classified According to Total Grades, Military Skills and Knowledge, Peer Ratings, and Critical Requirements respectively.

Appendix B-13 to B-20

 One Way Analysis of Variance of Pre and Post Test F and D Scores along with analysis of covariance results for Officer Cadets Classified According to Total Grades, Military Skills and Knowledge, Peer Ratings, and Critical Requirements respectively.

Appendix B-21 to B-25

 Mean S-I (16), S-I (8), S-I (4), F and D Scores for Officer Cadets Classified According to Military Skills and Knowledge, Peer Ratings, and Critical Requirements respectively.

APPENDIX B-1

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (16)
SCORES GROUPED BY TOTAL GRADES

Source	d.f.	MS	F	p
Between	2	15.14	0.43	0.66
Within	55	35.60		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (16)
SCORES GROUPED BY TOTAL GRADES

Source	d.f.	MS	F	p
Between	2	25.21	0.51	0.60
Within	55	49.50		

ANALYSIS OF COVARIANCE OF S-I (16)
SCORES GROUPED BY TOTAL GRADES

Source	d.f.	MS	Adj F	p
Between	2	9.19	0.22	0.80
Within	54	41.11		

APPENDIX B-2

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (16)
SCORES GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	F	p
Between	2	38.50	1.11	0.34
Within	55	34.75		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (16)
SCORES GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	F	p
Between	2	74.50	1.56	0.22
Within	55	47.71		

ANALYSIS OF COVARIANCE OF S-I (16)
SCORES GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	Adj F	p
Between	2	30.85	0.77	0.47
Within	54	40.31		

APPENDIX B-3

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (16)
SCORES GROUPED BY PEER RATINGS

Source	d.f.	MS	F	p
Between	2	23.70	0.67	0.52
Within	55	35.29		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (16)
SCORES GROUPED BY PEER RATINGS

Source	d.f.	MS	F	p
Between	2	35.93	0.73	0.49
Within	55	49.11		

ANALYSIS OF COVARIANCE OF S-I (16)
SCORES GROUPED BY PEER RATINGS

Source	d.f.	MS	Adj F	p
Between	2	28.92	0.72	0.49
Within	54	40.38		

APPENDIX B-4

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (16)
SCORES GROUPED BY CRITICAL REQUIREMENTS

Source	d.f.	MS	F	p
Between	2	13.00	0.36	0.70
Within	55	35.68		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (16)
SCORES GROUPED BY CRITICAL REQUIREMENTS

Source	d.f.	MS	F	p
Between	2	91.58	1.94	0.15
Within	55	47.09		

ANALYSIS OF COVARIANCE OF S-I (16)
SCORES GROUPED BY 22 CRITICAL REQUIREMENTS

Source	d.f.	MS	Adj F	p
Between	2	77.19	2.00	0.15
Within	55	38.59		

APPENDIX B-5

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (8)
SCORES GROUPED BY TOTAL GRADES

Source	d.f.	MS	F	p
Between	2	26.12	0.39	0.68
Within	55	67.50		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (8)
SCORES GROUPED BY TOTAL GRADES

Source	d.f.	MD	F	p
Between	2	90.48	0.85	0.43
Within	55	105.97		

ANALYSIS OF COVARIANCE OF S-I (8)
SCORES GROUPED BY TOTAL GRADES

Source	d.f.	MS	Adj F	p
Between	2	45.16	0.53	0.59
Within	54	85.44		

APPENDIX B-6

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (8)
SCORES GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	F	p
Between	2	51.66	0.78	0.47
Within	55	66.57		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (8)
SCORES GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	F	p
Between	2	198.21	1.94	0.15
Within	55	102.05		

ANALYSIS OF COVARIANCE OF S-I (8)
SCORES GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	Adj F	p
Between	2	99.76	1.20	0.31
Within	54	83.42		

APPENDIX B-7

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (8)
SCORES GROUPED BY PEER RATINGS

Source	d.f.	MS	F	p
Between	2	37.63	0.56	0.57
Within	55	67.08		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (8)
SCORES GROUPED BY PEER RATINGS

Source	d.f.	MS	F	p
Between	2	81.50	0.77	0.47
Within	55	106.29		

ANALYSIS OF COVARIANCE OF S-I (8)
SCORES GROUPED BY PEER RATINGS

Source	d.f.	MS	Adj F	p
Between	2	50.93	0.60	0.55
Within	54	85.22		

APPENDIX B-8

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (8)
SCORES GROUPED BY CRITICAL REQUIREMENTS

Source	d.f.	MS	F	p
Between	2	23.46	0.35	0.71
Within	55	67.60		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (8)
SCORES GROUPED BY CRITICAL REQUIREMENTS

Source	d.f.	MS	F	p
Between	2	188.63	1.84	0.17
Within	55	102.40		

ANALYSIS OF COVARIANCE OF S-I (8)
SCORES GROUPED BY 22 CRITICAL REQUIREMENTS

Source	d.f.	MS	Adj F	p
Between	2	140.79	1.72	0.19
Within	54	81.90		

APPENDIX B-9

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (4)
SCORES GROUPED BY TOTAL GRADES

Source	d.f.	MS	F	p
Between	2	126.82	0.73	0.49
Within	55	172.84		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (4)
SCORES GROUPED BY TOTAL GRADES

Source	d.f.	MS	F	p
Between	2	128.51	0.46	0.64
Within	55	281.33		

ANALYSIS OF COVARIANCE OF S-I (4)
SCORES GROUPED BY TOTAL GRADES

Source	d.f.	MS	Adj F	p
Between	2	19.00	0.09	0.92
Within	54	218.99		

APPENDIX B-10

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (4)
SCORES GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	F	p
Between	2	180.06	1.05	0.36
Within	55	170.91		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (4)
SCORES GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	F	p
Between	2	399.08	1.47	0.24
Within	55	271.49		

ANALYSIS OF COVARIANCE OF S-I (4)
SCORES GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	Adj F	p
Between	2	138.08	0.64	0.53
Within	54	214.59		

APPENDIX B-11

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (4)
SCORES GROUPED BY PEER RATINGS

Source	d.f.	MS	F	p
Between	2	168.69	0.98	0.38
Within	55	171.32		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (4)
SCORES GROUPED BY PEER RATINGS

Source	d.f.	MS	F	p
Between	2	398.72	1.47	0.24
Within	55	271.51		

ANALYSIS OF COVARIANCE OF S-I (4)
SCORES GROUPED BY PEER RATINGS

Source	d.f.	MS	Adj F	p
Between	2	175.35	0.82	0.45
Within	54	213.21		

APPENDIX B-12

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST S-I (4)
SCORES GROUPED BY CRITICAL REQUIREMENTS

Source	d.f.	MS	F	p
Between	2	102.90	0.59	0.56
Within	55	173.71		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST S-I (4)
SCORES GROUPED BY CRITICAL REQUIREMENTS

Source	d.f.	MS	F	p
Between	2	580.92	2.19	0.12
Within	55	264.88		

ANALYSIS OF COVARIANCE OF S-I (4)
SCORES GROUPED BY 22 CRITICAL REQUIREMENTS

Source	d.f.	MS	Adj F	p
Between	2	405.69	1.98	0.15
Within	54	204.68		

APPENDIX B-13

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST F SCORES
GROUPED BY TOTAL GRADES

Source	d.f.	MS	F	p
Between	2	288.59	0.61	0.55
Within	55	475.81		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST F SCORES
GROUPED BY TOTAL GRADES

Source	d.f.	MS	F	p
Between	2	862.31	2.06	0.14
Within	55	419.48		

ANALYSIS OF COVARIANCE OF F SCORES
GROUPED BY TOTAL GRADES

Source	d.f.	MS	Adj F	p
Between	2	470.36	4.07	0.02
Within	54	115.46		

APPENDIX B-14

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST F SCORES
GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	F	p
Between	2	886.91	1.95	0.15
Within	55	454.06		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST F SCORES
GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	F	p
Between	2	1084.91	2.64	0.08
Within	55	411.38		

ANALYSIS OF COVARIANCE OF F SCORES
GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	Adj F	p
Between	2	83.57	0.64	0.53
Within	54	129.79		

APPENDIX B-15

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST F SCORES
GROUPED BY PEER RATINGS

Source	d.f.	MS	F	p
Between	2	689.16	1.49	0.23
Within	55	461.25		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST F SCORES
GROUPED BY PEER RATINGS

Source	d.f.	MS	F	p
Between	2	321.78	0.73	0.49
Within	55	439.13		

ANALYSIS OF COVARIANCE OF F SCORES
GROUPED BY PEER RATINGS

Source	d.f.	MS	Adj F	p
Between	2	177.47	1.41	0.25
Within	54	126.31		

APPENDIX B-16

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST F SCORES
GROUPED BY CRITICAL REQUIREMENTS

Source	d.f.	MS	F	p
Between	2	763.66	1.67	0.20
Within	55	458.54		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST F SCORES
GROUPED BY CRITICAL REQUIREMENTS

Source	d.f.	MS	F	p
Between	2	1101.78	2.68	0.08
Within	55	410.77		

ANALYSIS OF COVARIANCE OF F SCORES
GROUPED BY 22 CRITICAL REQUIREMENTS

Source	d.f.	MS	Adj F	p
Between	2	424.43	3.62	0.03
Within	54	117.16		

APPENDIX B-17

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST D SCORES
GROUPED BY TOTAL GRADES

Source	d.f.	MS	F	p
Between	2	330.50	0.51	0.61
Within	55	655.07		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST D SCORES
GROUPED BY TOTAL GRADES

Source	d.f.	MS	F	p
Between	2	900.00	1.48	0.24
Within	55	609.25		

ANALYSIS OF COVARIANCE OF D SCORES
GROUPED BY TOTAL GRADES

Source	d.f.	MS	Adj F	p
Between	2	230.23	1.30	0.28
Within	54	177.11		

APPENDIX B-18

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST D SCORES
GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	F	p
Between	2	1091.00	1.74	0.19
Within	55	627.42		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST D SCORES
GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	F	p
Between	2	241.00	0.38	0.69
Within	55	633.22		

ANALYSIS OF COVARIANCE OF D SCORES
GROUPED BY MILITARY SKILLS AND KNOWLEDGE

Source	d.f.	MS	Adj F	p
Between	2	309.20	1.78	0.18
Within	54	174.19		

APPENDIX B-19

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST D SCORES
GROUPED BY PEER RATINGS

Source	d.f.	MS	F	p
Between	2	886.50	1.40	0.26
Within	55	634.85		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST D SCORES
GROUPED BY PEER RATINGS

Source	d.f.	MS	F	p
Between	2	695.50	1.13	0.33
Within	55	616.69		

ANALYSIS OF COVARIANCE OF D SCORES
GROUPED BY PEER RATINGS

Source	d.f.	MS	Adj F	p
Between	2	80.30	0.44	0.65
Within	54	182.66		

APPENDIX B-20

ANALYSIS OF VARIANCE OF COVARIATE OR PRE-TEST D SCORES
GROUPED BY CRITICAL REQUIREMENTS

Source	d.f.	MS	F	p
Between	2	1130.50	1.81	0.17
Within	55	625.98		

ANALYSIS OF VARIANCE OF CRITERIAN OR POST-TEST D SCORES
GROUPED BY CRITICAL REQUIREMENTS

Source	d.f.	MS	F	p
Between	2	1120.00	1.86	0.17
Within	54	601.25		

ANALYSIS OF COVARIANCE OF D SCORES
GROUPED BY 22 CRITICAL REQUIREMENTS

Source	d.f.	MS	Adj F	p
Between	2	37.37	0.20	0.82
Within	54	184.25		

APPENDIX B-21

MEAN S-I (16) SCORES OF ROUTP CADETS GROUPED BY:

a. MILITARY SKILLS AND KNOWLEDGE

Means	GROUP			F
	Above average	Average	Below average	
Pre test	18.52	16.16	15.41	1.11
Post test	18.05	15.06	13.56	1.56
Adjusted post test	17.10	15.24	14.11	0.77

b. PEER RATINGS

Means	GROUP			F
	Above average	Average	Below average	
Pre test	15.04	16.79	17.54	0.67
Post test	14.00	16.48	14.56	0.73
Adjusted post test	14.79	16.35	14.05	0.72

APPENDIX B-21 (Continued)

c. CRITICAL REQUIREMENTS

Means	Group			F
	Above average	Average	Below average	
Pre test	17.48	15.93	16.96	0.36
Post test	14.95	14.19	18.52	1.94
Adjusted post test	14.48	14.51	18.31	2.00

APPENDIX B-22

MEAN S-I (8) SCORES OF ROUTP CADETS GROUPED BY:

a. MILITARY SKILLS AND KNOWLEDGE

Means	Group			F
	Above average	Average	Below average	
Pre test	21.59	18.88	17.98	0.78
Post test	22.16	16.98	15.00	1.94
Adjusted post test	20.91	17.22	15.74	1.20

b. PEER RATINGS

Means	Group			F
	Above average	Average	Below average	
Pre test	17.30	19.92	20.03	0.56
Post test	15.68	19.35	16.40	0.77
Adjusted post test	16.84	19.00	15.98	0.60

APPENDIX B-22 (Continued)

c.   CRITICAL REQUIREMENTS

Means	Group			F
	Above average	Average	Below average	
Pre test	20.44	18.46	20.03	0.35
Post test	17.86	15.72	22.01	1.84
Adjusted post test	17.21	16.21	21.60	1.72

APPENDIX B-23

MEAN S-I (4) SCORES OF ROUTP CADETS GROUPED BY:

a.   MILITARY SKILLS AND KNOWLEDGE

Means	Group			F
	Above average	Average	Below average	
Pre test	29.09	24.68	22.03	1.05
Post test	29.28	22.79	18.75	1.47
Adjusted post test	26.90	23.04	20.58	0.64

b.   PEER RATINGS

Means	Group			F
	Above average	Average	Below average	
Pre test	21.04	26.99	25.11	0.98
Post test	18.68	26.91	20.53	1.47
Adjusted post test	21.12	25.77	20.52	0.82

APPENDIX B-23 (Continued)

c.   CRITICAL REQUIREMENTS

Means	Group			F
	Above average	Average	Below average	
Pre test	27.16	23.28	26.94	0.59
Post test	22.44	20.19	31.14	2.19
Adjusted post test	21.20	21.30	30.03	1.98

APPENDIX B-24

MEAN F SCORES OF ROUTP CADETS GROUPED BY:

a.   MILITARY SKILLS AND KNOWLEDGE

| | Group | | | F |
Means	Above average	Average	Below average	
Pre test	107.86	94.23	99.00	1.95
Post test	112.14	97.07	101.79	2.64
Adjusted post test	104.88	100.58	101.53	0.64

b.   PEER RATINGS

| | Group | | | F |
Means	Above average	Average	Below average	
Pre test	94.07	96.90	107.07	1.49
Post test	96.29	102.73	105.50	0.73
Adjusted post test	100.09	104.20	98.56	1.41

APPENDIX B-24 (Continued)

c.   CRITICAL REQUIREMENTS

Means	Group			F
	Above average	Average	Below average	
Pre test	90.29	102.90	98.00	1.67
Post test	96.43	107.77	94.57	2.68
Adjusted post test	103.16	104.37	95.11	3.62*

NOTE: Scheffé comparison yielded significance at .05 level between average and below average cadets grouped by total and critical requirements grades.
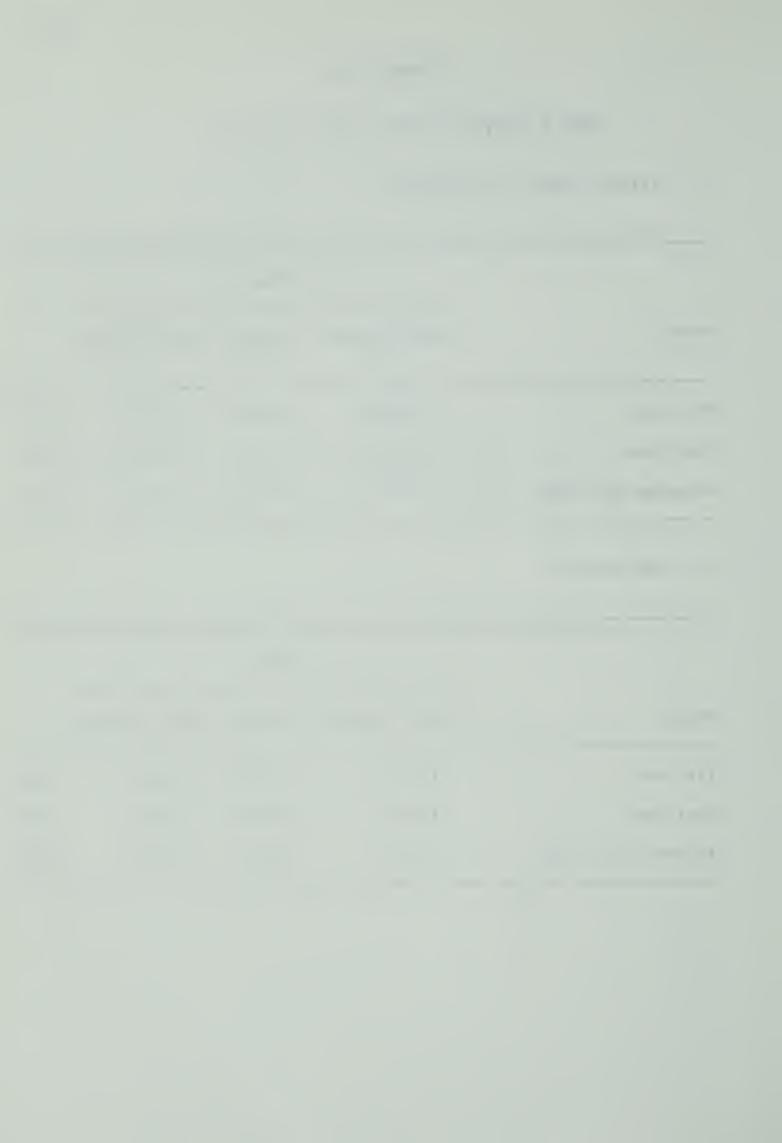
* $p < .05$

APPENDIX B-25

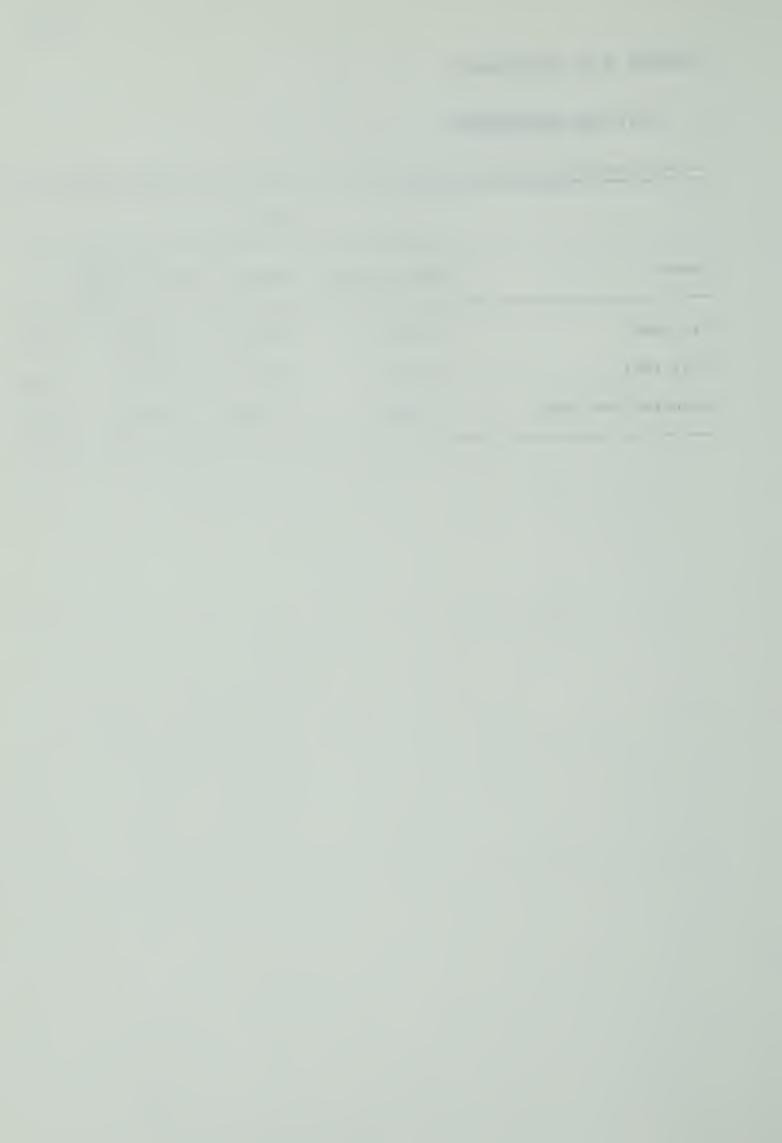MEAN D SCORES OF ROUTP CADETS GROUPED BY:

a. MILITARY SKILLS AND KNOWLEDGE

Means	Group			F
	Above average	Average	Below average	
Pre test	152.93	139.50	150.36	1.74
Post test	152.21	145.17	146.50	0.38
Adjusted post test	145.72	150.20	142.21	1.78

b. PEER RATINGS

Means	Group			F
	Above average	Average	Below average	
Pre test	141.64	142.53	155.14	1.40
Post test	141.36	146.20	155.14	1.13
Adjusted post test	144.44	148.55	147.02	0.44

APPENDIX B-25 (Continued)

c.   CRITICAL REQUIREMENTS

| Means | Group | | | F |
	Above average	Average	Below average	
Pre test	135.71	150.83	143.29	1.81
Post test	137.21	152.43	145.93	1.86
Adjusted post test	145.12	147.95	147.63	0.20

APPENDIX C

CAREER INTENTION RESPONSES

TYPICAL "YES" "NO" "MAYBE" CAREER INTENTION
RESPONSES OF ROUTP CADETS

Typical "yes" responses:

I have intentions of joining the Air Force as aircrew after graduation and maybe later work on space development...

As a medical student I am primarily interested in the medical services of the Canadian Forces. I hope to enrol in the Medical Officers Training Plan when I am eligible for admission. I have had this wish for some time and have retained my good impression of a Canadian Forces career during this course...

Stimulating if one gets into right corps, good opportunities for promotion, competition, financial reward, travel, and lots of equipment to work with...

I think a 20 year career in the Army would be very interesting and rewarding, providing one did not stagnate in one rank or position too long...

Personally, I feel I can offer something worthwhile to the Army. I like the community, the people...I've dreamed to be in the army one day...let me say Napoleon inspired me.

Typical "no" responses:

The boredom and senseless tasks that I see both officers and men in the regular forces perform has turned me against a career in the army...

...I would like to be as much of a master of my own life as possible. The service offers too many unnecessary uncertainties to a future already saturated with uncertainties...

The Forces do not enter my career planning because I feel they do not present good prospects for career advancement (witness personnel cuts) and are not suitable for a good family life (moves from base to base, constant changes of schools and external environment for children). Also the forces are in many ways restrictive in their intellectual pursuits (almost authoritarian in some aspects) and as a result are not the place for me...

The people in the regular forces I know are pretty narrow-minded conservatives with one frame of thought...

Because of the cutbacks in the forces, I do not see how it can be much of a career...

I feel the army is illogical and disorganized. Its concept of leadership is still strict discipline rather than the follower doing something he is told because he knows why he is doing it and therefore sees a reason for his actions...

The armed forces, in its present makeup, is an institution which stifles an individual's creativity. The social stratas found in the forces destroy much of the effectiveness between groups (i.e. NCO's and Officers). Mainly, life in the forces would fail to answer one basic question - "WHY"?

...present political thinking and measures have destroyed the very meaning of our forces as a useful body...a close look has shown me how, what was a great army, was ploughed into the ground by bureaucrats and military puppets.

The public and government don't give a damn about the forces... there is no point doing a job the country doesn't really want done...

Ready to serve - yes, but I don't like the excessive regimentation and stifling of initiative in regular force.

Future too uncertain! Personally I don't want to take the chance of getting into it and find myself unemployed in a few years...

Typical "maybe" responses:

I have always been interested in the armed forces but at present I find that I can't agree with some of our defence policies and I find the role of our armed forces uncertain. Until our armed forces is given what I consider a proper role I will confine my military career to the Reserves...

The Canadian Forces have always been an interest. I would join them if for some unforseen reason I could not lake Law and graduate with a Law degree...

One of the major reasons against going into the regular force on a career basis is the current uncertainty in roles and unification and these seem likely to continue. Nobody seems to be able to induce stability into the Forces. At a time when our forces should be expanded they are being further cut back from already too small numbers.